



**CROSS CUTTING ISSUES
(GENDER SENSITIVITY)**

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VASANTDADA SUGAR INSTITUTE
Manjari (Bk.) Tal. : Haveli, Dist. : Pune - 412 307, Maharashtra, India.

VSI/REGI/367/2022-23

Dt. 8th July 2022


CIRCULAR

Constitution of Anti-Sexual Harassment Cell

The following Anti Sexual Committee is constituted at Institute level and its tenure is from 01st August 2022 to 31st July 2023.


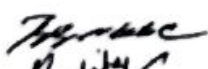


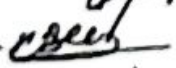
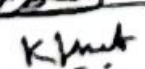
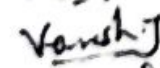
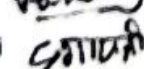
S.N.	Name	Position in committee	Contact No.	Email ID
1	Dr. Deepali Nimbalkar (Faculty)	Presiding Officer	9422514085	ds.nimbalkar@vassugar.org.in
2	Mrs. Kavita Mundankar	External Expert		
3	Dr. R.V. Burase (Faculty)	Member	7887924063	raghunathburase@gmail.com
4	Ms. Nandita Naik (Faculty)	Member	9763801098	nanditanaik27@gmail.com
5	Mr. R.S. Gangele (Non-teaching)	Member	9623192144	rs.gangele@vassugar.org.in
6	Mrs. C.S. Namol (Non-teaching)	Member	9579391005	registrar@vassugar.com
7	Ms. Komal Thorat (Research Student)	Member	7757815169	
8	Ms. Varsha Jadhav (Student)	Member	7410591184	varshajadhav435@gmail.com
9	Ms. Shewale Gayatri (Student)	Member	7887574416	gayatrishewale2001@gmail.com




D.B. Ghole
Principal

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Copy To:

- 1 Dr. Deepali Nimbalkar 
- 2 Mrs. Kavita Mundankar
- 3 Dr. R.V. Burase 
- 4 Ms. Nandita Naik 
- 5 Mr. R.S. Gangele 
- 6 Mrs. C.S. Namol 
- 7 Ms. Komal Thorat 
- 8 Ms. Varsha Jadhav 
- 9 Ms. Shewale Gayatri 

Reply to be sent on the name of Institute and not on individual's name.



**CROSS CUTTING ISSUES
(HUMAN VALUES &
PROFESSIONAL ETHICS)**



VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

Date: 01/10/2022

CIRCULAR

All the students are hereby informed that Institute is organizing a cleanliness drive during Swachh Bharat Mission on 2nd October 2022.

All the students are requested to join the above cleanliness drive.


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VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

02/10/2022

Activity Name: Cleanliness drive

Activity scope: The make aware about importance of cleanliness

Activity details:

Institute have organized cleanliness drive under "Swachh Bharat Mission" during 02 Oct 2022. The institute aims in creating awareness among the students regarding garbage segregation. Student learns about the importance hygienic condition for the self-development and the societal development. Students have actively participated in this drive.



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VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

Date: 18/04/2022

CIRCULAR

All the students are hereby informed that Institute is organizing free medical health checkup in association with Sahayadri Super Speciality Hospital, Hadapsar on 20th April 2022.

All the students are requested to join the above programme.




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VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

22/04/2022

Activity Name: Health camp/arogya shivir

Activity scope: Health camp for staff and students

Activity details:

A free medical health checkup camp for faculty, staff and student were organised on 20th April, 2022 at VSI student hall. The camp was organised in association with Sahyadri Super Speciality Hospital, Hadapsar. The team member of hospital including one Physician, one counsellor, and nurse were arrived at the institute at 10.00 am. Free physical examination along with free Blood Sugar, Blood Pressure, Bone density, height and weight were provided by the hospitals. Approximate 350 staff, student, faculty member of the institutes was participated in this drive. Camp was successfully organized under the guidance of VSI's Director General Shri, Shivaji Deshmukh.




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• **HEALTH CAMP/AROGYA SHIVIR (7th April 2023)**



Visit of Director General & Principal VSI during Health check-up (7th April 2023)



Director General, VSI taking feedback of the participants during health camp (7th April 2023)



Symens
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VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

Date: 04/04/2022

CIRCULAR

All the students are hereby informed that Institute is organizing a blood donation camp in association with Sasoon General Hospital, Pune on 5th April 2022.

All the students are requested to join the above programme.



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VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

06/04/2022

Activity Name: Blood donation camp

Activity scope: To collect the blood from students and staff

Activity details:

A free blood donation camp for student, staff and faculty were organised on 05th April, 2022 at VSI student hall. The camp was organised in association with Sasoon General Hospital, Pune on "World blood Donation Day. Approximate 100 staff, student, faculty member of the institutes was participated in this drive. Camp was successfully organized under the guidance of VSI's Director General Shri, Shivaji Deshmukh.



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• **BLOOD DONATION CAMP (5th April 2022)**



Healthcare persons checking VSI staff before blood donation (5th April 2022)



Zampers
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SOCIAL SERVICE SUPERINTENDENT (MUGAVE)

SASSOON GENERAL HOSPITAL, PUNE - 411 001 (Room No. 86)

Ph. No. (020) 26128000, Ex.: 2280/2362, 26102280 & 26102362

Outward No.

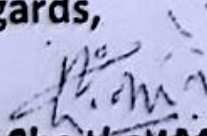
Date : 5 APR 2022

CERTIFICATE OF APPRECIATION

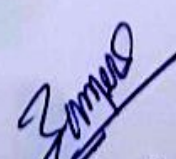
We are highly thankful to Vasantdada Sugar
Institute at Manjari Bk. Pune and appreciate it's kind
and valuable co-operation in "BLOOD DONATION
CAMP" on World Blood Donation Day this year : 2022
as well as other Social & Health Activities with
Sassoon General Hospital Pune and hope for its
support in future also.

Thanking You.

Regards,


Dr. Shankar Mugave

Head of the Department
Dept. of Social Service Superintendent
BJGMC & Sassoon Gen. Hospital, Pune.


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VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

Date: 14/03/2019

CIRCULAR

All the students are hereby informed that Institute is organizing its 29th meeting of Biosafety Committee (IBSC) on 18th March 2019. There will be talk & discussion on bio-safety & its importance

All the students are requested to join the above programme.



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VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

18/03/2019

Activity Name:

29th Institutional Bio-Safety Committee (IBSC)

Activity scope:

To discuss about issues related to bio-safety

Activity details:

The 29th meeting of Institutional Bio-Safety Committee (IBSC) of VSI meeting was held on 18th March, 2019 under the chairmanship of Mr. Shivajirao Deshmukh, DG, VSI in presence of Dr. P. Suprasanna, Head, FPBS, NABTD, BARC, Mumbai and DBT nominee., Dr. SK Raut, Consultant Doctor & Member, Shri. Vikas Deshmukh, Director, AST, VSI,

Dr. K. Harinath Babu, Senior Scientist, VSI – Member Secretary, Dr. RM Devarumath, Scientist & Member and Dr. SG Dalvi, Scientific Officer, VSI & member participated in the meeting. They discussed about various issues related to Bio-Safety, work progress and developing collaborations within and outside India for developing drought tolerant sugarcane.


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Memorandum of Understanding (MOU) between VSI & SESVANDERHAVE

As directed by Hon President VSI, Mr. Sharadchandra Pawat, MOU was signed between SESVANDERHAVE, Belgium (Europe) and VASANTDADA SUGAR INSTITUTE Pune (India) on 20th February, 2019 for sugarbeet crop research and allied training. SESVANDERHAVE is a Belgian company specialized in the breeding and commercialization of high quality sugarbeet seed.

Mr. Shivajirao Deshmukh, Director General, Mr. Vikas Deshmukh, Director, Agricultural Sciences & Technology Department, VSI and Mr. Jean Noel Evrard, Head of Marketing & Communication, Mr. Mohan Bajikar Indian Representative, SESVANDERHAVE

company signed the MOU and agreed to work together for the period of next five years. Mr. PV Ghodke Scientist & Head Agronomy also present during this agreement.

In this MOU both SESVANDERHAVE and VSI will jointly cultivate sugarbeet in India. SESVANDERHAVE will share knowledge on the development, train staff and sugarbeet farmers of selected sugar factories. VSI will evaluate / test new genetic seed material received from SESVANDERHAVE to identify the best suitable genetic seed material under Indian climate condition.



VSI COMMITTEE MEETINGS VSI COMMITTEE MEETINGS

29th Institutional Bio-Safety Committee (IBSC)

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VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

Date: 10/01/2019

CIRCULAR

All the students are hereby informed that Department of Alcohol Technology & Biofuels is organizing a lecture on "United States of America work experience in wine" by ProLearn India on 14th January 2019.

All the students are invited to attend the above lecture.

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VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

15/01/2019


Activity Name: Report of Lecture on United States of America work Experience Programme in Wine

Activity scope: To aware students about opportunities to acquire training in USA in wine sector

Activity details:

The lecture entitled 'United States of America work experience programme in wine' by ProLearn India was arranged by Department of Alcohol Technology & Biofuels on 14th January, 2019 for the M.Sc. (WBAT) course students. Dr. SV Patil, Head & Technical Adviser, Department of Alcohol Technology & Biofuels introduced Mr. Nitin Thakur, Director, ProLearn India and Ms. Pallavi Godase, Director, ProLearn India to the students. Dr. Patil explained the scope and opportunities to acquire training in USA in wine sector for the M.Sc. (WBAT) students. Mr. Nitin Thakur briefly presented the concept of USA winery work experience programme. He also shared practical experience of few Indian students who worked in vineyards and winery in USA, acquiring new skills and getting more exposed to wine making involving grape handling, fermentation tank operations, post fermentation operations, on-job training etc. Interested Indian students can get training under approved and qualified Host Trainers of vineyard and wineries in USA. He also provided guidance to the M.Sc. (WBAT) students regarding enrolment, application, selection, visa process etc. The session ended satisfactorily with question & answer and queries raised by the students.

Participants: Total number of participants was 42.


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SEMINAR SEMINAR

United States of America work Experience Programme in Wine

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Somesh
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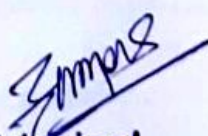


- **UNITED STATES OF AMERICA WORK EXPERIENCE PROGRAMME IN WINE (14th January 2019)**



Seminar talk to students during the programme on United States of America work Experience Programme in Wine (14th January 2019)




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VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

Date: 16/04/2018

CIRCULAR

All the students are hereby informed that Department of Alcohol Technology & Biofuels is organizing one day seminar on "Art of Brewing" in collaboration with Weyermann specialty malting company, Germany and Fermentis, France on 19th April 2018.

All the students are invited to attend the above seminar.


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VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

20/04/2018

Activity Name: Art of Brewing

Activity scope: To aware the students about brewing technology and developments

Activity details: One day seminar was organized on 'Art of Brewing' by the Department of Alcohol Technology & Biofuels, VSI in collaboration with Weyermann specialty malting company, Germany and Fermentis, France on 19th April 2018. Mr. Pradeep Verma, Techno-commercial Associate, Weyermann, Mr. Sanjeev Nagpal, Director, Om Distributor, Gurgaon and Brewers & associates of Om Distributors and Mr. Krishan Kumar Rajeev, Sales Manager, South & South East Asia, Fermentis, France participated in this event. First presentation of session-I was made by Mr. Pradeep Verma on 'Finest Weyermann Distillates Produced from Weyermann Malt Extracts'. Mr. Verma explained the process of production of whisky and other spirits using malt extract and further gave information on various malt extract and malt based colour additives which can be used in distilled spirit production. Mr. Pradeep Verma in his 2nd presentation on 'Authentic Weyermann Terroir Malts and the Brewing of Classic Lager Beers' gave a brief account of brewery terroir malts and also discussed the recipe of lager beer using Weyermann malts. He also covered some points on recipe formulations and characteristics of lager beer. The 3rd presentation was made by Mr. Krishan Kumar Rajeev on the topic 'Cider Production and Yeast Nutritional Requirement'. He described the process of cider production from apples and discussed steps involved in cider production, types of ciders and varieties of apples used for cider production. Mr. Krishna further gave information on nutrient supplements for production ciders and meads. In post lunch session, Mr. Verma delivered a talk on 'Water- Ministry in the Universe'. He took the audience through spiritual and scientific insights of water. He also discussed on current and future water issues and its impact of global brewing industry. Mr. Verma also talked about the ways of reducing water usage in the brewing industry. Later, Mr. Verma also demonstrated the Bevi-clean glass cleaner for minimum water usage. In the concluding session, Mr. Verma and his team had interactions with students regarding their future prospects in brewing and allied alcoholic


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VASANTDADA SUGAR INSTITUTE

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beverage industry. The staff of the Department proposed a vote of thanks which concluded the function.

Speaker details: Mr. Pradeep Verman, Techno-commercial Associate, Weyermann, Mr. Sanjeev Nagpal, Director, Om Distributor, Gurgaon and Brewers & associates of Om Distributors and Mr. Krishan Kumar Rajeev, Sales Manager, South & South East Asia, Fermentis, France

Participants: Total number of participants was 20.


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SEMINARS / TRAINING

Art of Brewing

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

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



Energy Efficiency-Master Strategy for Business Success in 21st Century

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

Mr. RL Tailor, Sr. Faculty Member, PCRA, Pune delivered a lecture on 'Energy Efficiency- Master Strategy for Business Success in 21st Century' at Sugar Engineering

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- **ART OF BREWING (19th April 2018)**



Seminar talk to students during the programme (Left) & group photo of participants and faculties involved in the activity (Right)



Zinnor

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**CROSS CUTTING ISSUES
(ENVIRONMENT &
SUSTAINABILITY)**



VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

Date: 12/09/2022

CIRCULAR

All the students are hereby informed that Department of Environmental Science in collaboration with Ministry of Environment, Forest and climate change is organizing a lecture on "Cheetah is back" on 14th September 2022.

All the students are invited for the above lecture.




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VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

14/09/2022

Activity Name: Cheetah is Back

Activity scope: The make aware about shrinking number as well as depleting habitat of Cheetah

Activity details:

Ministry of Environment, Forest and Climate Change's regional office, Nagpur coordinated with Department of Environmental Sciences to organize an awareness lecture on the theme 'Cheetah is back'. This lecture was organized on September 14, 2022 at seminar hall of the Institute. In this awareness presentation, shrinking number as well as depleting habitat of Cheetah was presented to audience. In addition, morphologically distinguishing characteristics of Cheetah, leopard and jaguar were explained with photographs. Efforts of Government of India to restore the Cheetah were highlighted in few slides of the presentation. Students of environmental sciences and few faculty members attended the programme. Dr. Amol Deshmane (Scientist, Dept of Environmental Sciences) delivered the presentation. Dr. Deepali Nimbalkar (Sr. Scientist and Head, Dept. of Environmental Sciences) and Mr. DB Ghule, Principal actively supported for organizing the programme.


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Cheetah is Back

Ministry of Environment, Forest and Climate Change's regional office, Nagpur coordinated with Department of Environmental Sciences to organize an awareness lecture on the theme 'Cheetah is back'. This lecture was organized on September 14, 2022 at seminar hall of the Institute. In this awareness presentation, shrinking number as well as depleting habitat of Cheetah was presented to audience. In addition, morphologically distinguishing characteristics of Cheetah, leopard and jaguar were explained with

photographs. Efforts of Government of India to restore the Cheetah were highlighted in few slides of the presentation. Students of environmental sciences and few faculty members attended the programme. Dr. Amol Deshmane (Scientist, Dept of Environmental Sciences) delivered the presentation. Dr. Deepali Nimbalkar (Sr. Scientist and Head, Dept. of Environmental Sciences) and Mr. DB Ghule (Registrar) actively supported for organizing the programme.



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• **CHEETAH IS BACK (14th September 2022)**



Lecture conducted during the awareness programme/activity, participants with Dr. Deepali Nimbalkar (faculty), Senior Scientist & Head, Department of Environmental Science attending the lecture (14th September 2022)



Dr. Amol Deshmane teaching the participants during the programme/activity (14th September 2022)



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VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

Date: 28/03/2022

CIRCULAR

All the students are hereby informed that Department of Alcohol Technology & Biofuels is organizing a one-day workshop on "Valorizing waste from sugar & allied industries" on 31st March 2022.

All the students are invited for the above workshop.




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VASANTDADA SUGAR INSTITUTE
Manjari (Bk), Pune- 412307, Maharashtra

31/03/2022

Activity Name: Valorizing Waste from Sugar & Allied Industries

Activity scope:

Activity details: One-day workshop entitled 'Valorizing waste from sugar & allied industries' was jointly organized by the Department of Alcohol Technology and Biofuels, VSI and UK partners at Vasantdada Sugar Institute (VSI), Manjari (BK), Pune, India on March 31, 2022. Participants were acquainted about the Sugar and Allied Industries which has huge opportunities for utilization of sugarcane bagasse (SCB) and press mud cake (PMC) for value added products such as bio-CNG, lactic acid, bio-butanol, succinic acid, xylitol, etc. There was lots of deliberation made on use of vWa technologies for production of value added products (bio-CNG, bio-butanol, lactic acid, succinic acid, xylitol) and their adoption in sugar and allied industries.

Participants: 133 participants including faculty member and student

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1. The planting of drought tolerant varieties like CoC 671, VSI 434 and VSI 08005 should be undertaken in the drought prone area of Maharashtra.
2. The early planting (Pre-season planting) should be preferred (October-November) in the drought prone area.
3. Distance between two rows can be reduced upto 90 cm in the drought prone area.
4. Incorporation of sugarcane trash in soil instead of burning OR in situ decomposition with trash mulching to increase the fertility of soil, it has a major role in soil conservation, checks the weed growth, helps to minimize the impact of water stress as well as salt stress on crop.
5. The application of *Acetobacter diazotrophicus* bioinoculant @ 3 lit/ha in 500 lit of water as foliar application after 60 days of planting in morning hours.
6. To control sugarcane mealy bug or scale insects infestation in stress condition by removal of lower 2-3 dry leaves and spraying of Imidachloprid 17.8 % SL @ 300 ml/ha (0.3 ml/lit) is recommended.
7. For the management of Early shoot borer and Internode borer in stress affected sugarcane crop, the release egg parasitoid *Trichogramma chilonis* @ 3-5 lac parasitized eggs /ha in suitable instalments in the field and soil application of granular insecticide Fipronil 0.3 GR @ 25 kg/ha or Chlorantraniliprole 0.4 GR @ 22.5 kg/ha or Spraying of Chlorantraniliprole 18.5% SC @ 375 ml per ha (0.4 ml/ lit of water) is recommended.
8. Under abiotic stress condition the incidence of sugarcane diseases viz, pokkah boeng, rust, red rot, wilt, pineapple and whip smut is increasing as well as abnormalities viz., leaf scorching, drying of leaves, rotting of leaves, decaying of leaves, defoliation and banded chlorosis are also observed. To control these diseases and abnormalities the recommended prophylactic measures should be adopted for the management of sugarcane diseases and abnormalities under stress condition.

Valorizing Waste from Sugar & Allied Industries

One-day workshop entitled 'Valorizing waste from sugar & allied industries' was jointly organized by the Department of Alcohol Technology and Biofuels, VSI and UK partners at Vasantdada Sugar Institute (VSI), Manjari (BK), Pune, India on March 31, 2022 with the active participation of sugar mills and distilleries from different States across the Country.

For this workshop following eminent Delegates & Speakers viz, Mr. Jayprakash Dandegaonkar, Chairman, NFCSFL & MRSSK Sangh Ltd., In Mr. Prakash Naikaware, MD, NFCSFL, India; Mr. Sanjay Khatal, MD, MRSSK Sangh Ltd., India; Prof. V. V. Ranade, Professor Emeritus, Queen's University Belfast, UK; Prof. SV Patil, Professor Emeritus, Alcohol Tech &



Biofuels, VSI, India; Prof. Yogendra Shastri, Department of Chemical Engineering, IIT Bombay, India; Mr. Joseph Vimal, MD, J & F Biogas, Chennai, India; Mr. Gajendra Singh, Dhampur Sugar Mills Ltd., UP, India (Online); Dr. Vinod Kumar, Cranfield University, Cranfield, UK (Online); Dr. Ines Baptista, Green Fuels Research Ltd., Berkeley, UK (Online); Mr. Shivajirao Deshmukh, Director General, VSI, India; Mr. Sambhaji Kadupatil OSD, VSI, India and apart from this, total 133 participant (Sugar Mills: 79 and VSI: 54) were present and

The workshop was inaugurated and welcome address was given by Mr. Shivajirao Deshmukh. He welcomed all the guests, sugar mill representatives and VSI staff. He told that Sugar and Allied Industries has huge opportunities for utilization of sugarcane bagasse (SCB) and press mud cake (PMC) for value added products such as bio-CNG, lactic acid, bio-butanol, succinic acid, xylitol, etc. He informed that VSI has collaborated with Nira Bhima SSKL for installation of two pilot scale anaerobic digesters to study various aspects and retrofit Compressed Biogas (CBG) facility in existing sugar mill complex.

Introductory remarks were given by Mr. Jayprakash Dandegaonkar. He informed that India is importing 77% crude oil requirements and 50% of natural gas requirement and Government of India has set a target of reducing this import by at least 10% by 2022. He also told that India has set a target of 10% blending of fuel ethanol with petrol by 2022 and 20% blending by 2025 for ethanol blending programme. He also informed that GOI has invited expression of Interest by Oil Marketing Companies (OMCs) for production & supply of CBG under Sustainable Alternative towards Affordable Transportation (SATAT) programme. He further informed that Indian Sugar Mills generates 8-10 million tons of PMC and 100 million tons of SCB every year. He told that both PMC & SCB can be utilized for CBG production through anaerobic digestion (AD). SCB can be used to produce value added products such as bio-ethanol, bio-butanol, lactic acid, succinic acid and xylitol, etc. He emphasized that if 50 % of Sugar mills out of total 540 Sugar mills will adopt CBG technology, they will produce 3.75 lakh ton of CBG per annum with revenue of Rs. 1750 crore per annum to India and this will

create employment opportunities. He also explained the market potential of lactic acid and succinic acid.

Technical Session-I

During the 1st technical section, Prof. VV Ranade gave a presentation on 'Valorising waste biomass via hydrodynamic cavitation and anaerobic digestion'. He briefly discussed the visions of vWa project. He told that the PMC & SCB produced from sugar & allied industries could be converted in to bio-CNG & other value added products. He specially focused on hydrodynamic cavitation pretreatment method using vortex based devices for cavitation. He also also discussed biogas improvement for spent wash digester on commercial scale using cavitation pretreatment.

The 2nd technical presentation was delivered by Prof. SV Patil on the topic entitled 'Value added products from waste biomass'. Prof. SV Patil started his presentation with the explanation of vWa project concept and the role of VSI in the project. In his talk, Prof. Patil emphasized mainly on bio-CBG and lactic acid production. He also explained about the achievement of biogas production of 480 M³ per ton of dry PMC or 120 M³ per ton of wet PMC. He also explained about the 45% enhancement of biogas production rate in case of PMC feed when the retention time was changed from 30 days to 20 days. On aspect of CBG production, Prof. Patil described 5 different types of CBG production models on Sugar Industry perspective.

The third technical presentation was delivered by Prof. Yogendra Shastri on the topic entitled 'Technologies for Sugar Industry Waste Valorization: Development and Scale-up Potential'. He explained life cycle analysis for different products (lactic acid, succinic acid, xylitol & CBG) in vWa. He mentioned regarding the techno-economic & life cycle assessment of different value added products (Rs. 215/kg lactic acid, Rs. 37/kg of CBG, Rs. 121/kg for succinic acid & Rs. 230/kg for xylitol). He also explained biomethane and lactic acid purification work at IIT Bombay.

Technical Session II

During the 2nd technical session, Mr. Gajendra Singh, Dhampur Sugar Mills Ltd., UP, India gave a presentation on '**Biomethane production: An opportunity**'. He explained the single stage anaerobic digestion with cavitation and two stage anaerobic digestion. He explained anaerobic digestion data for 1M³ and 7M³ digester. He also shown flame test for 7M³ digester. He also explained production of volatile fatty acids (acetic, propionic and butyric acids) during biogas production for two stage anaerobic digestion.

The 2nd technical presentation was delivered by Dr. Vinod Kumar on the topic entitled '**Sugarcane bagasse-based Production of Biochemicals**'. He focused on production of xylitol and succinic acid from SCB. He informed that 102.5 g/L of xylitol was produced through fed-batch fermentation from pure xylose in comparison to 86.6 g/L of xylitol from SCB xylose hydrolysate. He further informed that 36.7 g/L of succinic acid was produced from pure xylose in comparison to 28.7 g/L of succinic acid from SCB xylose hydrolysate.

The 3rd technical presentation was delivered by Dr. Ines Baptista on '**Towards biobutanol production: ABE fermentation of sugarcane bagasse hydrolysate**'.

She emphasized on biobutanol production from synthetic media and SCB hydrolysate containing both glucose and xylose.

The 4th technical presentation was delivered by Mr. Joseph Vimalon on '**CSTR Semi dry fermentation technology**'. He described in detail about pros and cons of semi-dry fermentation technology in the field of bio-digestion for various different substrates (paddy straw, press mud, cane trash, Napier grass).

The technical session I & II was coordinated by Dr. Kakasaheb Konde, Head, Professor and Technical Adviser, AT & B, VSI, India.


In the panel discussions, Mr. Shivajirao Deshmukh, Mr. Sambhaji Kadupatil, Mr. Prakash Naiknavare, Prof. Yogendra Shashtri, Mr. SD Bokhare, Prof. Vivek Ranade, Prof. SV Patil and Dr. KS Konde were present on the dias. There was lot of deliberation made on use of vWa technologies for production of value added products (bio-CNG, bio-butanol, lactic acid, succinic acid, xylitol) and their adoption in sugar and allied industries. The participants of the workshop raised many questions and doubts about the use of feed stocks released from sugar & allied industries and necessary explanation were provided by the delegates.

The programme was concluded with vote of thanks given by Mr. Sambhaji Kadupatil.




2021-2022

- VALORISING WASTE FROM SUGAR & ALLIED INDUSTRIES (31st March 2022)



75
Azadi Ka
Amrit Mahotsav

Valorizing Waste from Sugar & Allied Industries



VWa

Workshop Program

10.00 - 11.00 hrs:	Registration	Registration
11.00 - 11.15 hrs:	Welcome by Shri. Shivajirao Deshmukh, Director General, VSI	Welcome by Shri. Shivajirao Deshmukh, Director General, VSI
11.15 - 11.20 hrs:	Lightning Lamp By Dignitaries	Lightning Lamp By Dignitaries
11.20 - 11.40 hrs:	Key Note Address by Shri. Jayprakash Dandegaonkar, Chairman, NFCSFL & MRSSK Sangh Ltd., India	Key Note Address by Shri. Jayprakash Dandegaonkar, Chairman, NFCSFL & MRSSK Sangh Ltd., India
11.40 - 12.00 hrs:	Value added products from waste biomass by Prof. S. V. Patil, Emeritus Professor, Alcohol Tech & Biotuels, VSI, India	Value added products from waste biomass by Prof. S. V. Patil, Emeritus Professor, Alcohol Tech & Biotuels, VSI, India
12.00 - 12.20 hrs:	Valorizing waste by Prof. V. V. Ranade, Emeritus Professor, Queen's University Belfast, UK	Valorizing waste by Prof. V. V. Ranade, Emeritus Professor, Queen's University Belfast, UK
12.20 - 12.40 hrs:	Technologies for sugar industry waste valorization: Development and scale-up potential by Prof. Yogendra Shastri, Department of Chemical Engineering, IIT Bombay, India	Technologies for sugar industry waste valorization: Development and scale-up potential by Prof. Yogendra Shastri, Department of Chemical Engineering, IIT Bombay, India
12.40 - 13.40 hrs:	Lunch & Networking	Lunch & Networking
13.40 - 14.00 hrs:	Biomethane production: An opportunity by Mr. Gajendra Singh, Champur Sugar Mills Ltd., UP, India	Biomethane production: An opportunity by Mr. Gajendra Singh, Champur Sugar Mills Ltd., UP, India
14.00 - 14.20 hrs:	Succinic acid & xylitol from bagasse by Dr. Vinod Kumar, Cranfield University, Cranfield, UK	Succinic acid & xylitol from bagasse by Dr. Vinod Kumar, Cranfield University, Cranfield, UK
14.20 - 14.40 hrs:	Towards biobutanol production: ABE Fermentation of sugarcane bagasse hydrolysate by Green Fuels Research Ltd., Berkeley, UK	Towards biobutanol production: ABE Fermentation of sugarcane bagasse hydrolysate by Green Fuels Research Ltd., Berkeley, UK
14.40 - 15.00 hrs:	Using CSTR Semi dry fermentation process for Biogas/CBG generation from Agro wastes by Mr. Joseph Vimal, MD, J & F Biogas, Chennai, India	Using CSTR Semi dry fermentation process for Biogas/CBG generation from Agro wastes by Mr. Joseph Vimal, MD, J & F Biogas, Chennai, India
15.00 - 15.15 hrs:	High Tea Break	High Tea Break
15.15 - 16.15 hrs:	Panel Discussion Shri. Vishal Patil, Dr. Indrajeet Mohite, Shri. B. B. Thombare, Shri. Harshvardhan Patil, Shri. Prakash Naiknaware, Shri. Sanjay Khatat, Shri. Shivajirao Deshmukh, Shri. Sambhaji Kadu-Patil, Prof. V.V. Ranade, Prof. S.V. Patil	Panel Discussion Shri. Vishal Patil, Dr. Indrajeet Mohite, Shri. B. B. Thombare, Shri. Harshvardhan Patil, Shri. Prakash Naiknaware, Shri. Sanjay Khatat, Shri. Shivajirao Deshmukh, Shri. Sambhaji Kadu-Patil, Prof. V.V. Ranade, Prof. S.V. Patil
16.15 - 16.30 hrs:	Valedictory Function by Shri. Sambhaji Kadu-Patil OSD, VSI, India	Valedictory Function by Shri. Sambhaji Kadu-Patil OSD, VSI, India

Program brochure for program entitled "Valorising Waste from Sugar & Allied Industries" (31st March 2022)




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Dist. Pune - 412 307



Lighting of the lamp by the guests during the inauguration of the programme entitled "Valorising Waste from Sugar & Allied Industries" (31st March 2022)



Guests sitting in the dais during the programme entitled "Valorising Waste from Sugar & Allied Industries" with presence of programme banner on their backside (31st March 2022)



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VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

Date: 16/02/2022

CIRCULAR

All the students are hereby informed that Department of Alcohol Technology & Biofuels is organizing a training programme on "Overview of distilleries and alcoholic beverage industry" on 18th February 2022.

All the students are invited for the above program.




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VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

18/02/2022

Activity Name: Overview of Distilleries and Alcoholic Beverage Industry

Activity scope: The overview the different aspects of distillery and alcoholic beverage industry

Activity details:

Mr. Prasad Survey, Deputy Divisional Commissioner, Pune, State Excise, Government of Maharashtra State requested VSI to arrange half day training programme on 'Overview of distilleries and alcoholic beverage industry' for their 113 trainee officers. In this regard Department of Alcohol Technology & Biofuels (AT & B), VSI conducted half day training programme on 18th February 2022 for the trainee State Excise Officers, Government of Maharashtra. Mr. SR Jadhav, Deputy Superintendent, Hadapsar, Pune, Mr. Yuvraj Shinde, Deputy Superintendent, Pimpri Chinchwad and other few officers of training center Khandala were also present for the training programme. In the training Mr. DA Patil, Assistant Professor & Joint Technical Adviser, AT & B. elaborated the importance of the course to the participants. The first lecture was delivered by Mr. RV Godage, Assistant Professor & Joint Technical Adviser, AT & B. He has briefly presented his presentation on the topics such as Molasses quality, Storage of molasses, Batch fermentation, Continuous Overview of Distilleries and Alcoholic Beverage Industry fermentation, Atmospheric and Multipressure distillation, Characteristics of rectified spirit, Extra neutral alcohol, Fuel ethanol, Azeotropic distillation, Molecular sieve dehydration and DFPD Guidelines, Mr. DA Patil has presented his presentation on topics such as Role of Excise in distillery unit, Alcoholic fermentation process, Factors affecting on distillery performance, Atmospheric distillation process, Production process of country liquor, Indian made foreign liquor (Whisky, Brandy, Rum, Gin & Vodka), records and registers to be maintained in CL & IMFL, taxes and duties on molasses and alcohol. Dr. KS Konde, Associate Professor & Technical Adviser, AT & B, thanked to the Commissioner, State Excise, GoM and their Officers for sending their trainee officers for training. He has also taken the review of the lectures. In the concluding session of the training programme, Mr. Prasad Survey thanked to the management of VSI and concern staff of AT & B for giving valuable information about training to the trainee officers.


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Overview of Distilleries and Alcoholic Beverage Industry

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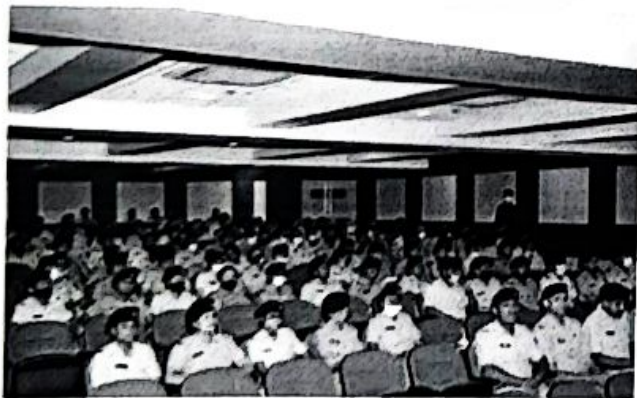
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Oos Sheti Dnyanyag & Dnyanlaxmi

In the memory of founder president of VSI late Padmabhushan Dr. Vasantdada Patil, *Oos Sheti Dnyanyag & Dnyanlaxmi* - residential training programmes were organized for sugarcane growers


of Maharashtra at VSI in two batches during December 21 - 24 & 28 - 31, 2021 reported in previous issue of VSI Bulletin and remaining batches were conducted during January to March 2022 is reported in the present issue of VSI Bulletin. Details as given below;

• **OVERVIEW OF DISTILLERIES AND ALCOHOLIC BEVERAGE INDUSTRY**
(18th Feb 2022)



Excise persons present in the programme (Left side image), Faculty Mrs. Sukeshni Havale giving training to excise people who were part of the programme (Right side image) (18th Feb 2022)




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VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

Date: 10/08/2021

CIRCULAR

All the students are hereby informed that Department of Environmental Science is organizing an online workshop and demonstration under Aazaadi ka Amrut Mahotsav on 13th Aug 2021.

All the students are requested to attend the above online workshop.


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13/08/2021

Activity Name: Environmental Clearance, Compliances, Violations and Uploading of EC on Parivesh Portal

Activity scope: The make aware about Environmental Clearance, Compliances, Violations and Uploading of EC on Parivesh Portal

Activity details:

The Ministry of Environment Forests & Climate Change has taken steps to improve the environmental compliance process and also to bring transparency in this regard. As a part of this, its required that all the industries upload the information of their existing Environmental Clearance, Compliances, Violations and Uploading of EC on Parivesh Portal ECs online on Parivesh portal to help in the effective implementation of the EC condition. In order to help our member sugar mills in this aspect, the Department of Environmental Sciences organized an online workshop and demonstration under the auspices of "Aazaadi ka Amrut Mahotsav on 13th August 2021. This workshop was a joint effort of Maharashtra Federation of Cooperative Sugar Factories, Sugar Commissionerate, Government of Maharashtra & VSI. The workshop was attended by 95 participants. Mr. Sambhaji Kadupatil, OSD, VSI welcomed the participants in the beginning with an outline of the program. After this Mr. Shivajirao Deshmukh, Director General welcomed all participants and dignitaries. On the occasion of 'Azadi ka Amrut Mahotsav', he briefly covered evolution of sugar industry in India and particularly cooperative sugar sector in Maharashtra. Taking note of increase in the environmental issues in this industry, he urged the factory personnel to seriously look into it. Mr. Sanjay Khatal (MD, Maharashtra Federation of Cooperative Sugar Factories) picked up the same thread from DG, VSI and emphasized that global warming and climate change have become a major challenge for all of us. He expressed that sugar industry is now viewed as a bio-energy complex. Hence, the programme like this, which addresses environmental issues are immensely important. Towards end of his speech, he requested all participants to shift from 'chaltahai' (taken for granted) attitude and become serious on environmental issues.

Mr. Shekhar Gaikwad, Sugar Commissioner, in his speech, also emphasized on the pollution issue. In addition, he explained the role of sugar industry in Ethanol Blended Petrol (EBP) programme and economy of the state. He concluded his speech by giving best wishes to participants and organizers. Mr. Prakash Naiknavare (MD, National Federation of Cooperative Sugar Factories) joined the session as a participant. He expressed his eagerness to understand the present issue. This was followed by a presentation on 'Environmental Clearance Compliances and Violations' by Dr Deepali Nimbalkar where she explained the difference and the various notifications pertaining to the issue. She also talked about the special provisions for environmental clearance available for ethanol projects and the applicability of NIPL & B2 category.


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- Composition of cane and juice, principles of cane juice clarification with different types of liming and sulphitation process and tips to improve clarification efficiency.
- Role of Reducing sugar in sugar processing and various measures to reduce the final molasses purity.
- Pan Boiling: Theory of pan boiling, Tips to improve exhaustion in all grades massecuites
- Vertical and horizontal continuous pan and operational problems.
- Decanter and rotary vacuum filter
- Quality of sugar with reference to various test parameters , various types of sugars and liquid sugar.
- Intermediate boiling house products colour and their impact on final product
- Various measures to reduce the steam consumption in sugar mill
- Various measure to achieve best efficiency and sugar quality, during B Heavy diversion
- Molasses quality – Total reducing sugar and Un-fermentable sugar
- Water management in sugar mills & recent trends in water management in sugar processing- Type of technologies for sugar condensate polishing units, ETP & STP Operation

Milling Plant

Department of Sugar Engineering, VSI conducted a one week duration tailor made short term training programme for Balarampur Chini Mills Ltd., groups Haidergarh Unit (UP) for engineering department heads, sectional heads and mill engineers of ten sugar mills on the 'Milling Plant' from 9th to 14th August 2021. Total 32 engineers participated in the training programme. Unit Head, Haidergarh unit, Corporate Technical Team Head (CTT Engineering) and HR officers, inaugurated the short-term training programme.

Mr. SP Nalawade Joint Technical Advisor and Mr. DN Shiotle conducted short-term training programme. In short term training different topics like cane handling, cane preparation, cane milling, mill gearing, hydraulic system, capacity and power calculations,

mill setting & trash plate profile. In addition to this, virtual training conducted on modern trends in juice extraction and power saving in milling plant by Mr. RA Chandgude-Technical Adviser & Head and Mr. PG Patil -Technical Adviser (Electrical).

The training programme also included practical calculations for sugar mill imbibitions, dilution ratio, juice drainage, mill capacity, power, mill setting and trash plate profile. The department heads of sugar units presented best practices adopted of their mills for repair and maintenance. They also, conducted the survey along with CTT Head along with participating engineers to Haidergarh plant and discussed on the mill performance, best practices in maintenance of milling plant.

Environmental Clearance, Compliances, Violations and Uploading of EC on Parivesh Portal

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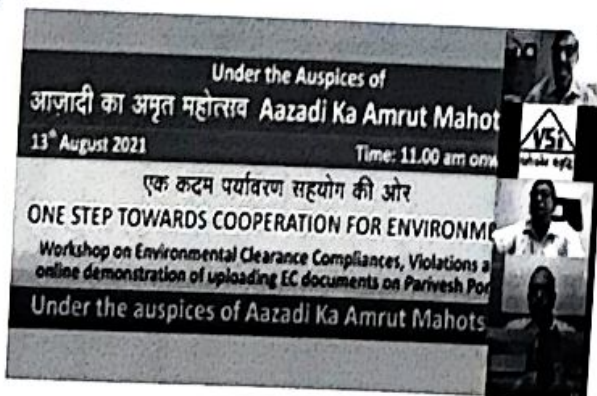
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After the presentation, Dr. Vivek Patil and Mr. Kapil Uphade gave an online demonstration of registration of project on Parivesh portal of MoEFCC and uploading of the EC documents in the same. The EC documents of Vilas SSK were uploaded as a part of this demonstration.

There was active participation from the audience. They raised number of queries, followed by the demonstration. These queries were satisfactorily answered by staff of Dept of Environmental Sciences, as well as DG, VSI. The programme ended with vote of thanks proposed by Dr. Amol Deshmane.



• ENVIRONMENTAL CLEARANCE, COMPLIANCES, VIOLATIONS AND UPLOADING OF EC ON PARIVESH PORTAL (13th Aug 2021)



Mr. Shivajirao Deshmukh, Director General welcomed online to all participants and dignitaries on the occasion of 'Azadi ka Amrut Mahotsav (Left side image), three faculties (Dr. Deepali Nimbalkar & Dr. Vivek Patil guiding participants on handling of Parivesh portal) (13th Aug 2021)



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VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

Date: 01/07/2019

CIRCULAR

All the students are hereby informed that Department of Alcohol Technology & Biofuels is organizing a presentation on 'Industrial Waste Water Treatment & Water Management Solutions for Sugar and Distillery Industry' on 03rd July 2019 along with M/s. Ion Exchange (India) Ltd. to understand the latest technological developments in the field of industrial water management solutions,

All the students are invited for the above presentation.




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VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

03/07/2019

Activity Name: Industrial Waste Water Treatment & Water Management Solutions for Sugar and Distillery Industry

Activity scope: The make aware about latest technological developments in the field of industrial water management solutions

Activity details:

Department of Alcohol Technology & Biofuels, VSI was organized presentation on 'Industrial Waste Water Treatment & Water Management Solutions for Sugar and Distillery Industry' on 03rd July 2019 along with M/s. Ion Exchange (India) Ltd. (M/s. IEIL), (Sugar & Distillery Vertical). These presentations were arranged to understand the latest technological developments in the field of industrial water management solutions, which can help technical staff of VSI to leverage better performance for our consultancy services to member and non-member Sugar/Distillery industry. In this context the staff of Alcohol Technology & Biofuels, Sugar Engineering, Sugar Technology and Environment Science, VSI were participated for this event. Dr. SV Patil, Technical Advisor and Head, Department of Alcohol Technology & Biofuels, welcomed the entire team from M/s. IEIL. He explained contribution of M/s. IEIL is a pioneer company for industrial water treatment in India and is recognized internationally in water and environment management. From M/s. IEIL total nine representatives having individual specialties in water and waste water management solution were present and they covered topics like Ion exchange membranes; Waste water treatment (WWTP, DTRO, CPU) and WTP (DM, RO, Softeners). Mr. Vishal Sathe (Deputy Manager-Corporate Marketing Group) presented introductory company profile. He covered the complete range of technologies, products and services to offer total solutions for water treatment and water management solution to every sector of industry. He also presented footprints achieved by company in last fifty years in the area of environment management solutions for all sectors across the globe.

Mr. Sridhar Padmanaban (Senior Vice President- Membrane Division) covered the Reverse Osmosis (RO) membrane technology. In his presentation he explained about the three stage technology for manufacturing of industrial membrane. He focused on in house membrane manufacturing facility has installed India's first state-of-the-art, completely integrated and automated Reverse Osmosis membrane manufacturing plant at Verna, Goa. He also covered different membrane technologies used for water filtration treatment such as Nano-filtration, Ultrafiltration and different membrane module used. Mr. Girish Mirashi (Senior Manager- Environment Division) presented aerobic and anaerobic treatment technologies for waste water solutions in Sugar/Distillery industry. He also focused on different aerobic, anaerobic industrial equipment/system used for water treatment with their principles of operations.


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EVENTS EVENTS

Industrial Waste Water Treatment & Water Management Solutions for Sugar and Distillery Industry

Department of Alcohol Technology & Biofuels, VSI was organized presentation on 'Industrial Waste Water Treatment & Water Management Solutions for Sugar and Distillery Industry' on 03rd July 2019 along with M/s. Ion Exchange (India) Ltd. (M/s. IEIL), (Sugar & Distillery Vertical). These presentations were arranged to understand the latest technological developments in the field of industrial water management solutions, which can help technical staff of VSI to leverage better performance for our consultancy services to member and non-member Sugar/Distillery industry. In this context the staff of Alcohol Technology & Biofuels, Sugar Engineering, Sugar Technology and Environment Science, VSI were participated for this event.

Dr. SV Patil, Technical Advisor and Head, Department of Alcohol Technology & Biofuels, welcomed the entire team from M/s. IEIL. He explained contribution of M/s. IEIL is a pioneer company for industrial water treatment in India and is recognized internationally in water and environment management. From M/s. IEIL total nine representatives having individual specialties in water and waste water management solution were present and they covered topics like Ion exchange membranes; Waste water treatment (WWTP, DTRO, CPU) and WTP (DM, RO, Softeners). Mr. Vishal Sathe (Deputy Manager-Corporate Marketing Group) presented introductory company profile. He covered the complete range of technologies, products and services to offer total solutions for water treatment and water management solution to every sector of industry. He also presented footprints achieved by company in last fifty years in the area of environment management solutions for all sectors across the globe.

Mr. Sridhar Padmanaban (Senior Vice President-Membrane Division) covered the Reverse Osmosis (RO) membrane technology. In his presentation he explained about the three stage technology for manufacturing of industrial membrane. He focused on in house membrane manufacturing facility has installed India's first state-of-the-art, completely integrated and automated Reverse Osmosis membrane manufacturing plant at Verna, Goa. He also covered different membrane technologies used for water filtration treatment such as Nano-filtration, Ultrafiltration and different membrane module used. Mr. Girish Mirashi (Senior Manager-Environment Division) presented aerobic and anaerobic treatment technologies for waste water solutions in Sugar/Distillery industry. He also focused on different aerobic, anaerobic industrial equipment/system used for water treatment with their principles of operations.

Mr. Dilli Babu (Manager-Sugar, Distillery & Food & Beverage Vertical) and Mr. P. Padmanaban (Deputy Manager-Proposals) covered dealkalization and demineralization of boiler feed water. He explained about the Indion Swift, a technology developed by M/s. IEIL for dealkalization and demineralization of boiler and cooling tower feed water.

The event was concluded vote of thanks by Dr. RV Dani. He thanked team of M/s. IEIL for their presentations and participants.

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• **INDUSTRIAL WASTE WATER TREATMENT & WATER MANAGEMENT SOLUTIONS FOR SUGAR AND DISTILLERY INDUSTRY (3rd July 2019)**



Treatment of industrial effluent using Open type bioreactor (3rd July 2019)



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VASANTDADA SUGAR INSTITUTE

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Date: 27/10/2019

CIRCULAR

All the students are hereby informed that Department of Environmental Science is organizing two invited lecture on the occasion of "Wildlife week" on 1st & 5th Oct 2019.

All the students are invited to attend the above lectures.



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10/10/2019


Activity Name: Wildlife Week

Activity scope: To create awareness about the importance of non-fossil fuels as an alternative to conventional fossil fuels and to highlight the impact of all fuels on the environment

Activity details: On the occasion of wildlife week, Department of Environmental Sciences had organized two invited lectures. Of these, the theme of first lecture was use of modern equipment for wildlife monitoring (e.g., animal tracking system, etc). It was held on October 01, 2019 and delivered by Mr. Dnyanesh Rathod. He was associated with Wildlife Institute of India and worked on project related to monitoring of tigers. Students were amazed while observing the slides and videos related to use of camera traps, GPS and collarids, etc in monitoring or tracking tiger. He also explained the application of collected data using these tools in preparation of conservation and management plan. Towards the end of the presentation a tool called 'range finder' was demonstrated to students by him. The second invited lecture was uniquely themed on ethno-ornithology; i.e. use of birds by different tribes in traditional way. Dr. Vinayak Chavan, faculty at Fergusson College, Pune delivered this lecture on October 05, 2019. He is an academic visitor to Edward Grey Research Institute of Field Ornithology and Institute of Human Sciences, University of Oxford, United Kingdom for collaborative work on Ethno-Ornithology in Western Ghats. He presented field observations from Tamhini area of Pune district of Western Ghat. In the presentation, he explained various services offered by bird species to forest dwellers and thus, students realized the importance of avian (bird) diversity in day-to-day life. He also shared views on research opportunities in wildlife. In the post presentation discussion, few students expressed their willingness to pursue research in wildlife related theme. In response, he happily agreed to guide students based on individual proposal.

Speaker details: Mr. Dnyanesh Rathod, Wildlife Institute of India & Dr. Vinayak Chavan, faculty at Fergusson College, Pune

Participants: Total number of participants was 24


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Wildlife Week

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44th Foundation Day of VSI

VSI celebrated 44th foundation day on November 19, 2019 under the chairmanship of Mr. Dilip Walase-Patil, Vice President of VSI. Prof. Dr. Shivajirao Kadam, Chancellor Bharati Vidhyapeeth Pune was the Chief Guest of the function. Dr. Vijay Pol Sharma, Chairman CACP and Dr. Pande, Adviser CACP both were present as special guests. Dr. Indrajeet Mohite, Shri. Ashutosh Kale, members of Governing Council of VSI, Dr. DG Hapase Ex. Director VSI and Mr. US Indalkar officer from Sugar Commissioner Office Pune were also present.

All the dignitaries were welcomed by Mr. Shivajirao Deshmukh, Director General VSI. The event was formally inaugurated by Chief Guest Dr. Shivajirao Kadam by lighting the traditional lamp along with other dignitaries. Director General VSI introduced the Chief Guest and all dignitaries to the gathering consist of Scientists Technical Personnel's, other staff members and Students. Vice- President VSI briefed the R & D activities of VSI. Chairman CACP elaborated about the cost & prices of Agriculture commodities especially Sugarcane and Sugar products.





VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

Date: 01/03/2019

Notice

All the students are hereby informed that Department of Alcohol Technology & Biofuels is organizing a one-day workshop on "Valorizing waste (vWa) from Sugarcane industries via innovations in pretreatment, bio-production and process intensification" on 05th March 2019.

All the students are invited to attend the above workshop.




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05/03/2019

Activity Name: Valorizing waste (vWa) from Sugarcane industries via innovations in pretreatment, bio-production and process intensification

Activity scope: To create awareness among students about the importance of sugar industry waste for its valorization to different products

Activity details: One day awareness week on Valorizing waste (vWa) from Sugarcane industries via innovations in pretreatment, bio-production and process intensification was organized by Dept. of Alcohol Technology & Biofuels, VSI. Awareness among students about the importance of sugar industry waste for its valorization to different products was created. Students could learn about the importance of the sugar industry waste for Biofuel & biochemicals production.

Speaker details: Dr. S.V. Patil, Dept. of Alcohol Technology & Biofuels, VSI

Participants: Total number of participants was 120 including staff & students


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the speakers received several questions which were answered to the satisfaction of the participants. Many participants requested VSI to arrange such workshops twice a year, so that they remain updated and it helps

to follow specific process and implementation of norms to take care of environment and to improve the status of mills as well as workers. The workshop ended with vote of thanks by Mr. Vivek Patil



Valorising waste (vWa) from Sugarcane Industries via Innovations in Pre-treatment, Bio-production and Process Intensification

One day awareness workshop on 'Valorising waste (vWa) from sugarcane industries via innovations in pre-treatment, bio-production and process intensification' was held on 5th March 2019 at Vasantdada Sugar Institute (VSI), Department of Alcohol Technology & Biofuels.

Dr. Indrajeet Mohite, Prof. Vivek Ranade, Mr. Vijaykumar Goel, Prof. Vivek Kumar and Prof. Yogendra Shastri present on the dais. Introductory remarks on vWa project were delivered by Prof. Vivek Ranade. He explained the basic concept to valorize these wastes into bio-gas, lactic acid, succinic acid and bio-butanol.

Total participation in the workshop was about 120 including VSI staff. In Inauguration Ceremony, Dr. SV Patil, Head, and Technical Advisor, Department of Alcohol Technology & Biofuels welcomed all the guests, vWa partners, industry representatives and VSI staff. Mr. Shivajirao Deshmukh DG, felicitated

Mr. Shivajirao Deshmukh, in his In his inaugural speech, congratulated Prof. Ranade for his vision in formulating a very innovative project and offering a great opportunity to VSI for leading the vWa project from India side. He elaborated on activities conducted by VSI for the sugar and allied industry as well as footprint



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of VSI on entire sugar industry in India. He also introduced Dr. Indrajeet Mohite to audience and his contribution in the area of sugar and allied industries.

The key note address was given by Dr. Indrajeet Mohite, Chief Guest, explained about the economics of sugar industry and its socio-economical contributions in developing schools, colleges, hospitals and creating jobs in rural India. He mentioned that alternative products can come out from vWa project which will boost entrepreneurship, rural economy, employment and provide additional source of revenue to farmers and sugar industry. He advised the industry as well as vWa project partners to follow the environmental norms to save the mother earth. He thanked Department of Biotechnology, Government of India and Innovate UK for funding the vWa project and Prof. Ranade, Queen's University Belfast, UK for his initiative and effort taken in formulating the vWa project.

In technical sessions-I were chaired by Dr. Indrajeet Mohite. The first presentation on 'Valorizing waste from sugar & allied industries via innovations in pretreatment, bio-transformations and process intensification' was delivered by Prof. Vivek Ranade. He emphasized on quantum of waste generated by sugar industry and distilleries in India. He also mentioned about the sub-optimal utilization of these waste/resources though current practices like burning of cane trash, use of bagasse for cogeneration etc. He then briefed the concept of vWa biorefinery where cavitation and anaerobic digestion (AD) will be used as pretreatment as opposed to use of costly enzymes in 2 G ethanol technologies. He further added that AD will utilize hemicellulose (xylose) in lignocellulosic material for biogas production and the sugar/glucose released from cellulose will be fermented to lactic acid or succinic acid or biobutanol. Lignin can be valorized to multiple products like DNF, HMF etc or incinerated in boiler for steam and power generation.

He also briefed about vWa partners and their role in carrying out this project.

The second technical presentation was delivered by Dr. SV Patil on 'Value added products from waste biomass and SATAT Initiative'. He talked about the global initiatives taken by the different countries for biogas production. He also mentioned that the number of biogas plants in Germany has doubled to ~9000 plants from 4136 plants in 2010. He also informed that Oil Marketing Companies (OMCs) have invited Expression of Interest (Eoi) from Entrepreneurs/co-operative societies/technology provider for production & supply of compressed biogas (CBG) and discussed about Ministry of New and Renewable Energy has notified Central Financial Assistance. Further he explained as the distillery biogas plant generally operates 250 days per annum, CBG production plant will run only for 250 days with available spent wash. Therefore, he suggested alternative feedstock such as bagasse, press mud, cane trash etc can be co-digested along with spent wash or digested separately in existing digester for remaining 115 days. Dr. Patil presented three case studies for CBG production and its revenue generation. Dr. Patil presented the lab data on compositional analysis of different sugarcane bagasse cultivars and lactic acid fermentation from synthetic and alkali pretreated bagasse. In conclusion, he mentioned that every sugar mill in country will have CBG plant in future.

In technical session-II, Prof. Ranade talked on 'Enhancing biogas yield via novel pre-treatment' and presented vWa biorefinery stage I approach which is about utilization of bagasse, press mud and/or cane trash in a digester for biogas generation and digestate generated will be used for bio-composting. He described the hydrodynamic cavitation as one of the potential pretreatment method of lignocellulosic biomass. He also described the different ways to generate cavitation and explained how vortex based cavitation (VoDCa) is superior over other technologies.



He informed that VoDCa is a patented process technology innovated by CSIR-NCL and licensed to Vivira Process Technology, Pune for commercialization. He presented biogas generation data on existing commercial scale spentwash digester with cavitation & without cavitation. At the end, he concluded that vWa biorefinery stage I will be implemented commercially with the technology developed by the vWa and commercial scale trials will start in next three to six months.

The next presentation of this session was given by Mr. Ashish Nawade from Innovative Environmental

Technology Pvt. Ltd. (IETL). He presented technologies for H₂S and CO₂ removal from biogas so that it will fulfill OMCs norms for CBG. He provided the details of CBG plant installed by ITEL at Tatyasaheb Kore Warana SSK, Warnananagar with power generation of 50KW/h.

At the end, an open, interactive session with the industry participants was carried out where lot of deliberations took place on value addition from sugar and allied industry waste.

Quarterly Review of Promotional Cane Development Award Scheme (CDAS)

A one day workshop on 'Quarterly review of promotional cane development award scheme (CDAS)' was held on 23rd March, 2019 under the chairmanship of Mr. Vikas Deshmukh, Director, AST and the welcome address was given by Dr. RS Hapase which was followed by the lightening of lamp and the introductory speech by Director, AST. In his speech he highlighted the importance of scheme components i.e. seed, planting planning and harvesting programme; soil fertility management and drip irrigation. Total 85 participants from 45 sugar factories were attended the workshop. Dr. RS. Hapase talked on 'Progress of VSI's promotional award scheme (CDAS) 2017-18'. He highlighted the progress of each participating factory under four different scheme components for achieving higher productivity. The Agriculture Officers of 45 sugar factories talked on the progress of the schemes under their area for the year 2017-18 under this scheme. During the discussion following points were emerged as the following recommendations and concluded with vote of thanks.

1. The management and cane development officer of the participating sugar mills should be serious to implement the CDAS to achieve the higher

cane and sugar yield and have the scope to improve in the remaining period of the scheme.

2. At present the seed replacement ratio of the most of the factories is very low and need improvement to follow the three tier seed programme.
3. The newly developed varieties like VSI 12121 (VSI 08005), CoVSI 03102 and MS 10001 should be included in the planting planning according to their soil and area based response.
4. Soil test based fertilizer application ratio needs to be increased to save the cost on use of fertilizers.
5. To increase the soil organic carbon, the factories should concentrate on maximum use of green manuring and compost application.
6. The bio-fertilizers and multi-nutrients use in sugarcane crop found effective to increase the sugarcane yield, so the present ratio needs to be increased.
7. The use of bio-pesticide and bio-fungicide should be used according to the pest and disease situation in the area.
8. The scarcity of water in most of the parts of Maharashtra during 2018-19 is a serious issue and to overcome the situation the area under

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- **VALORIZING WASTE (VWA) FROM SUGARCANE INDUSTRIES VIA INNOVATIONS IN PRETREATMENT, BIO-PRODUCTION AND PROCESS INTENSIFICATION (5th March 2019)**



Dignitaries & external invited guests on the stage during the programme entitled "Valorizing waste (vWa) from Sugarcane industries via innovations in pretreatment, bio-production and process intensification (5th March 2019)



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Dr. S.V. Patil, Head & Technical Adviser, Dept of Alchol Technology, Director General- Shivajirao Deshmukh, VSI & Prof. Vivek Ranade lightning lamp during inauguration of the programme entitled "Valorizing waste (vWa) from Sugarcane industries via innovations in pretreatment, bio-production and process intensification (5th March 2019)



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VASANTDADA SUGAR INSTITUTE

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Date: 07/03/2019

CIRCULAR

All the students of M.Sc. in Environmental Sciences are hereby informed that Department of Environmental Science is organizing one-day field visit to eco-restoration site developed by Ecological Society at Panshet, Pune on 12th March 2019.

All the students are invited to attend the field visit.


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13/03/2019

Activity Name: Field visit to Eco-restoration site Developed by Ecological Society at Panshet, Pune

Activity scope: To aware students for observing eco-restoration site

Activity details:

One-day field visit organized for M.Sc. (Environmental Sciences) students by Department of Environmental Sciences for eco-restoration on 12th March 2019. Students were taken to the site at Panshet in Pune district which was ecologically restored by Ecological Society. Mrs. Swati Gole one of the founder members of Ecological Society, Pune accompanied the group as a 'resource person'. On the way to Panshet, students observed changes in habitat and land use. They raised several queries related to observations and queries were answered by Dr. Deshmane Mrs. Swati Gole explained the history of the site then shifted to the principles of restoration and correlated the processes. She elaborated on the changes observed at restoration site in last three decades, the limitation observed in the process and her unbiased assessment of the entire restoration exercise. She also shared a grassland restoration experience that was carried out near Phaltan in Satara district of Maharashtra. The entire discussion session was useful to students as it offered a different perception, enhance their ability to think and visualize about importance of nature in daily life. After discussion, students visited the restoration site and noted their observations. Followed by, students visited a sacred grove at village Ambegaon Khurd. In the interactive session, students raised queries which were answered by Mrs. Gole and Dr. Deshmane.


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EVENTS

The 70th Republic Day of India



The 70th Republic Day of India was celebrated on 26th January 2019. On this occasion the Director General, Mr. Shivajirao Deshmukh hoisted the National flag in the Institute in presence of staff members.



Field visit to Eco-restoration site Developed by Ecological Society at Panshet, Pune

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Date: 21/02/2019

CIRCULAR

All the students are hereby informed that Department of Environmental Science is organizing one-day awareness workshop on "Recent Developments in Environment and Safety in the Sugar and Allied Industry" on 25th February 2019.

All the students are invited to attend the workshop.


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25/02/2019

Activity Name: One day Awareness workshop on "Recent Developments in Environment and Safety in the Sugar and Allied Industry"

Activity scope: The make aware about significance of environment and safety in sugar and allied industry

Activity details:

The significance of environment and safety in industrial operations cannot be overemphasized, more so in sugar and allied industry. The industry is the backbone of the rural economy yet in recent times it has been the focus of criticism over excessive water usage and water pollution. There have also been incidences and accidents which point to the lack of adequate industrial safety. Such incidences have also caused environmental concern. Recently, there have been new notifications regarding environmental clearance for sugar and distillery projects vis-a-vis the National Biofuels Policy as also the use of groundwater (CGWA). These will have an impact on the sugar and distillery industry.

Considering the above, a one-day awareness workshop on 'Recent developments in environment and safety in the sugar and allied industry' was organized at Vasantdada Sugar Institute on 25th February 2019. Dr. Amol Deshmane welcomed all the guests and requested the Director General welcomed the Chief Guest, Mr. Shekhar Gaikwad (Sugar Commissioner). This was followed by an introduction to the theme of the workshop by Dr. Deepali Nimbalkar and an address by Mr. Shivajirao Deshmukh, DG, VSI which focused on the significance of environmental issues for the industry and VSI's role in approaching them. Mr. Shekhar Gaikwad, in his inaugural address, advised the environmental officers to work with dedication and follow every norm strictly to minimize the impacts due to sugar industry and distilleries. He suggested making a pollution inventory for sugar and distillery industry along with regular self-audits & third part audits once in three years.

This workshop was arranged in two sessions, Technical Session I- Safety & Technical Session II- Environment. Mr. Isak Mujawar gave the first talk on general safety guidelines for the sugar and distillery industry (including HRA). He explained the terms as Hazard, Risk and how to identify and control hazard as well as risk. He suggested setting up an emergency exit plan for worker's safety. The second lecture on PESO Guidelines for ethanol storage was delivered by Mr. Prakash Patil who explained The Petroleum Act, 1934 and Rules, 2002, in detail with the rules for import, transport & storage of petroleum and also the criteria for license. The final presentation in this session was made by Dr. Eknath Alhat, VSI who elaborated on the safety issues in Effluent Treatment Plants.


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Recent Developments in Environment and Safety in the Sugar and Allied Industry

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In the second session on environmental issues, Dr. SV Patil, Head & Technical Advisor, Dept. of Alcohol & Bio-fuels explained the various alternatives available to the distillery industry for achieving zero liquid discharge. The final talk was delivered by Dr. Deepali Nimbalkar on recent EIA Notification and its implications for sugar and distillery industry. She explained in detail about the notifications pertaining to the distilleries regarding fuel ethanol projects as also the EIA notification on violation projects. She also enlightened briefly about the draft notification regarding extraction of groundwater.

The workshop received a very good response with 79 participants who were active in the deliberations. All



- **ONE DAY AWARENESS WORKSHOP ON “RECENT DEVELOPMENTS IN ENVIRONMENT AND SAFETY IN THE SUGAR AND ALLIED INDUSTRY” (25th February 2019)**



Director General, VSI Mr. Shivajirao Deshmukh with Dr. Deepali Nimbalkar, HOD, Department of Environmental Sciences & Chief Guest Mr. Sekar Gaikwad, Sugar Commissioner, Govt. of Maharashtra lighting the lamp during inauguration of the programme. (25th February 2019)

Welcome of the speaker and guest delivering their speech during the programme



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Director General, VSI Mr. Shivajirao Deshmukh felicitating Chief Guest Mr. Sekar Gaikwad, Sugar Commissioner, Govt. of Maharashtra during inauguration of the programme entitled "One day awareness workshop on "recent developments in environment and safety in the sugar and allied industry" (25th February 2019)



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Chief Guest Mr. Sekar Gaikwad, Sugar Commissioner, Govt. of Maharashtra during his speech. Director General, VSI Mr. Shivajirao Deshmukh with Dr. Deepali Nimbalkar, HOD, Department of Environmental Sciences sitting on the dias during the programme entitled "Recent developments in environment and safety in the sugar and allied industry" (25th February 2019)



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VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

Date: 05/01/2022

CIRCULAR

All the students are hereby informed that Department of Alcohol Technology & Biofuels is organizing a training programme on “Traditional vs. Scientific Technologies for Mahua Spirit and Heritage Alcoholic Beverages Production-Optimization, Evaluation and Training (Heritage Wine Policy)” which will be conducted from January 10th – 28th 2022.

All the students are invited for the above program.




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VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

10/01/2022

Activity Name: Traditional vs Scientific Technologies for Mahua Spirit and Heritage Alcoholic Beverages Production-Optimization, Evaluation and Training (Heritage Wine Policy)

Activity scope: To educate the tribal people & VSI students on scientific process of mahua liquor production & its optimization.

Activity details: A training programme was conducted from January 10-28, 2022 under the research project entitled 'Traditional vs scientific technologies for Mahua spirit and heritage alcoholic beverages production-optimization, evaluation and training (heritage wine policy)' was carried out by Department of Alcohol Technology and Biofuels (AT& B), VSI. This project is sanctioned by Principal Secretary, Department of Commercial Tax, Govt. of Madhya Pradesh and funded by Ministry of Tribal Affairs, Govt. of India.

Speaker details: Prof. SV Patil, Technical Adviser & Head, Department of AT & B briefly explained to the participants regarding all departmental activities with special reference to the Mahua project such as alcoholic & non-alcoholic beverages, Mahua tree & its importance, traditional vs scientific fermentations & distillation, analysis of total reducing sugar, ethanol & total organic volatile acidity, concept of sensory evaluation, isolation & maintenance of yeast culture, understanding pilot & effluent treatment plant, ideal packaging methods and rules & regulations linked to the Excise Department.

Participants: Total number of participants was 13 (from outside)


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TRAINING

Traditional vs Scientific Technologies for Mahua Spirit and Heritage Alcoholic Beverages Production-Optimization, Evaluation and Training (Heritage Wine Policy)

A training programme for tribal representatives was conducted from **January 10-28, 2022** under the research project entitled '**Traditional vs scientific technologies for Mahua spirit and heritage alcoholic beverages production-optimization, evaluation and training (heritage wine policy)**' was carried out by **Department of Alcohol Technology and Biofuels (AT& B), VSI**. This project is sanctioned by Principal Secretary, Department of Commercial Tax, Govt. of Madhya Pradesh and funded by Ministry of Tribal Affairs, Govt. of India.

Total 13 participants and Mr. Anirudh Mookerjee, project consultant attended the training programme. The participants were from Dindori and Alirajpur Dist. of Madhya Pradesh (MP) and most of the participants were tribal people. Participants were from various backgrounds such as farmer, Excise Officer and science students. Mr. Rajesh Henry, Additional Excise Commissioner, GoMP attended the training programme for one day. As instructed by GoMP, the training programme was conducted in Hindi.

Prof. SV Patil, Technical Adviser & Head, Department of AT & B briefly explained to the participants regarding all departmental activities with special reference to the Mahua project.

The training programme covered different topics such as alcoholic & non-alcoholic beverages, Mahua tree & its importance, traditional vs scientific fermentations & distillation, analysis of total reducing sugar, ethanol & total organic volatile acidity, concept of sensory evaluation, isolation & maintenance of yeast culture, understanding pilot & effluent treatment plant, ideal packaging methods and rules & regulations linked to the Excise Department. The course also included hands-on practical based on the above topics which will be helpful for the participants while working at pilot demo plant at MP. During the training period, there was a one-day visit to

BrimaSagar Maharashtra Distilleries Ltd, Shreepur, Solapur, Maharashtra in which participants were acquainted about the Industrial pot distillation and foreign liquor.

On the occasion of the concluding session on January 28, 2022, the training certificates were given to the participants by Mr. Shivajirao Deshmukh, DG, VSI. He also briefed importance of this project about Mahua liquor. All the participants introduce their self and gave their positive feedback. During the session, discussion was also held and session was concluded with vote of thanks by Dr. S. Behera, Scientist, VSI.



Shivajirao Deshmukh
Principal



- **TRADITIONAL VS SCIENTIFIC TECHNOLOGIES FOR MAHUA SPIRIT AND HERITAGE ALCOHOLIC BEVERAGES PRODUCTION-OPTIMIZATION, EVALUATION AND TRAINING (HERITAGE WINE POLICY) (Jan 10-28, 2022)**



Director General, VSI distributing certificate during the programme (Jan 10-28, 2022)



Group photo of the faculties [From left side Dr. K.S. Konde (standing-position-1), Prof. S.V. Patil (standing-position-5), Dr. Shuvashish Behera (standing-position-11), Mr. D.A. Patil (standing-position-11)] Director General, VSI & participants participated in the above programme (Jan 10-28, 2022)



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VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

Date: 21/02/2019

CIRCULAR

All the students are hereby informed that Institute is organizing a training program on 'Advanced technologies for improving crop productivity and increasing water use efficiency in sugarcane' for farmers on 25-27 February, 2019 and 1-3 March, 2019.

All the students are also requested to join the above programme.


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VASANTDADA SUGAR INSTITUTE

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04/03/2019

Activity Name: Advanced technologies for improving crop productivity and increasing water use efficiency in sugarcane

Activity scope: The make aware about advanced technologies for crop productivity and efficient use of water.

Activity details:

The training program on 'Advanced technologies for improving crop productivity and increasing water use efficiency in sugarcane' for farmers was conducted in two batches of three days duration at VSI. The training for first batch was conducted during 25-27 February, 2019 in which 180 farmers (134 Men and 46 Women farmers) attended training program. Second batch of training program was conducted during 1-3 March, 2019 in which 195 farmers (179 Men and 16 Women farmers) attended the training program. Both the programs were inaugurated by Director, AST, in presence of farmers, officers from ITC and Head of Departments AST were present.

In training, information of sugarcane varieties released by VSI viz. CoVSI 9805, VSI 434, CoVSI 03102 and VSI 08005 was given to the famers. The proper varietal planning and harvesting program plays an important role in sugar industry for achieving higher cane yield and sugar recovery. The management practices of different varieties were explained to the farmers. The seed is also one of the important inputs in sugarcane production. It is essential to follow three tier seed nursery program for better crop yield. The information of seed production technology including seedling production was given to the farmers. The tissue culture is an advanced technology of fast multiplication of sugarcane varieties and also development of new sugarcane varieties. The sugarcane productivity mainly depends on the various agronomic practices carried out during the crop growth period. The information of preparatory tillage, use of good quality seed, seed treatment, methods of planting, Intercultural operations like earthing up, fertilizer management, weed control, intercropping, crop rotation and ratoon management was given to the famers. Integrated nutrient management is important to boost the crop yield. Organic matter in the soil is an essential component for healthy crop growth that improves soil fertility. It greatly improves physical and biological condition of soils, reduces soil erosion and increases water holding capacity


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Advanced Technologies for Improving Crop Productivity and Increasing Water use Efficiency in Sugarcane

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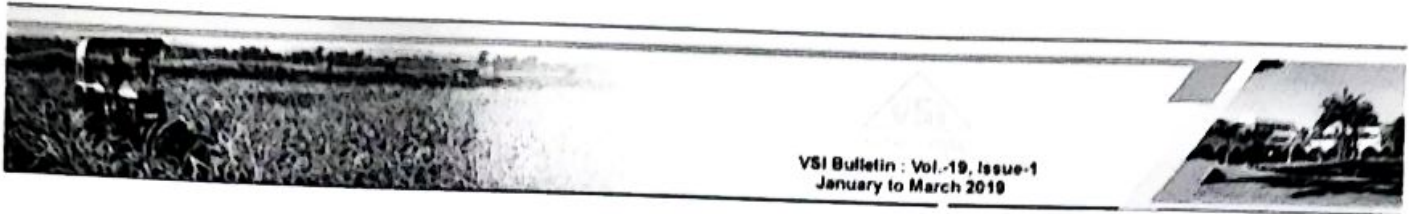
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sugarcane productivity mainly depends on the various agronomic practices carried out during the crop growth period. The information of preparatory tillage, use of good quality seed, seed treatment, methods of planting, Intercultural operations like earthing up, fertilizer management, weed control, intercropping, crop rotation and ratoon management was given to the farmers. Integrated nutrient management is important to boost the crop yield. Organic matter in the soil is an essential component for healthy crop growth that improves soil fertility. It greatly improves physical and biological condition of soils, reduces soil erosion and increases water holding capacity. The sugarcane trash can be used in sugarcane fields either directly or after composting. The green manuring practice with sunhemp or dhaincha prior to sugarcane planting is very useful to improve soil fertility. Balance doses of organic and inorganic fertilizers are important for meeting nutritional requirement of sugarcane crop. The information of various biofertilizers useful for sugarcane cultivation, bio-stimulator for productivity improvement was also given to the farmers. Water management of sugarcane plays a pivotal role in improving crop productivity. The conventional irrigation system did not permit the restricting of irrigation only to meet the requirement of the root zone, leading to excessive percolation and other losses. It therefore, results in water logging, soil


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salinity and drought situations. The overall irrigation efficiency has not been more than 30-40%. Under this scenario it is necessary to adopt modern irrigation techniques like surface, sub surface drip and rain gun sprinkler irrigation needs to be promoted in sugarcane agriculture. The fertigation is also possible with drip and rain gun sprinkler irrigation and water soluble fertilizers can be efficiently applied through these techniques. The modern irrigation technology results in increasing water use efficiency and also for improving the fertilizer use efficiency. The mechanization is also important in the context of untimely and limited availability of man power and increased cost of labour for agriculture purpose. The equipment available for mechanized farm operations were shown to the farmers and insisted for its adoption to bring down the cost of cultivation of sugarcane. Integrated disease and pest management

is very much important in sugarcane cultivation in order to avoid the yield losses due to occurrence of particular disease or pest. Integrated control measures at right time results in minimizing the losses due different pests and diseases. The control measures for various diseases and pests were explained to the farmers. The emerging trend of biological control of various diseases and pests was also explained to the farmers. Participants were also shown various experimental field plots, water management practices, farm implements and tissue culture raised plantlets during the field visit.

Interactive session was conducted after finishing the lectures, practical and field visits. During this session, the queries/questions of farmers were answered. The certificates were given participants at the hands of Director, AST and the program concluded with vote of thanks.



James
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- **ADVANCED TECHNOLOGIES FOR IMPROVING CROP PRODUCTIVITY AND INCREASING WATER USE EFFICIENCY IN SUGARCANE (25th to 27th February 2019)**



Lightning of the lamp during the inauguration of the programme (25th February 2019)



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Prize distribution during the programme entitled “• Advanced technologies for improving crop productivity and increasing water use efficiency in sugarcane (25th to 27th February 2019)



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Vasantdada Sugar Institute

Manjari (Bk.), Tal. Haveli,

Dist Pune - 412 307



VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

Date: 22/01/2019

CIRCULAR

All the students are hereby informed that Institute is organizing a seminar on "Integrated approach to enhance economic yield of sugarcane and its by-products" on 25th January 2019.

All the students are also requested to join the above seminar.


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VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

25/01/2019

Activity Name: Integrated approach to enhance economic yield of sugarcane and its by-products

Activity scope: The make aware about ecofriendly practices for sugarcane production

Activity details:

The seminar was organized in the presence of Mr. Sharadchandra Pawar, Hon. President of VSI on "Integrated approach to enhance economic yield of sugarcane and its bye-products" at Vasantdada Sugar Institute, Pune on 25th January 2019, which was coordinated by Science and Technology Park (Institute promoted by Ministry of Science & Technology, Govt. of India).

The discussions were focused on the following topics:

- Eco-friendly ways of increasing yield of sugarcane and decreasing use of pesticides
- Enhancing sugar quality and increasing extraction yield from cane while crushing
- Increasing alcohol percentage in distillery.
- Bagasse- Multiple products increasing economic yield.
- Spent wash and press mud- efficient treatment.

On the above topics, the presentations were made by Dr. Rajendra Jagdale, Director General, Science and Technology Park, Dr. Sheshadria, Chennai, Dr. Chanakya, Indian Institute of Science, Bangalore, Mr. Shiva Subramaniam, Mr. Rajpal Navalkar and Dr. Solayappan.

On this occasion Mr. Dilip Walse-Patil, Hon. Vice President of VSI, Chairman National Federation of Cooperative Sugar Factories Ltd., Trustees and Council members of VSI, Mr. Shivajirao Deshmukh, Director General, Mr. Vikas Deshmukh, Director, AST, VSI and Head of the departments of Technology and Agriculture Division, 25 leading sugar mills viz. Chairmen, Managing Directors, Chief Engineers, Chief Agriculture Officers and Distillery Managers were participated in the program.

During the discussion, DG, VSI, raised the issue regarding Techno-Economical viability of the technologies suitable for sugar industry and allied bye-products. Shri Sharadchandraji Pawar suggested studying various innovative technologies to be adopted in the sugar industry and allied bye-products to enhance the progress of sugar industry in collaboration with Science and Technology Park, Govt. of India.


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Integrated Approach to Enhance Economic Yield of Sugarcane and its Bye-Products

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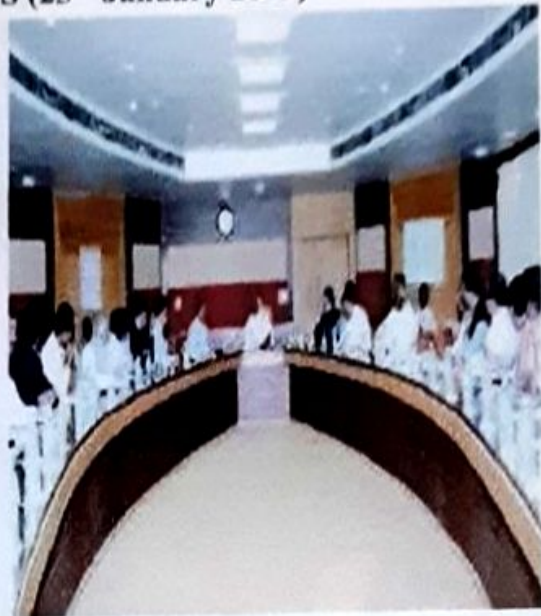


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- **INTEGRATED APPROACH TO ENHANCE ECONOMIC YIELD OF SUGARCANE AND ITS BY-PRODUCTS (25th January 2019)**



Meeting & discussion on economic yield of sugarcane & its by-products during the programme entitled "Integrated approach to enhance economic yield of sugarcane and its by-products" (25th January 2019)



A handwritten signature in blue ink, appearing to read "S. S. S.", written over a horizontal line.

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VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

Date: 20/02/2019

CIRCULAR

All the students are hereby informed that Institute is organizing a workshop on "Sugarcane Crop Management under Water Stress Condition" on 23rd February 2019.

All the students are invited for the above workshop.


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VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

23/02/2019

Activity Name: Workshop on Sugarcane Crop Management under Water Stress Condition

Activity scope: The make aware about crop management under water stress condition

Activity details:

The activity of monthly workshop is well admired among the cane officers from the sugar mills in the state. As a part of the extension activity the monthly workshop was organized on 'Sugarcane crop management under water stress condition' on 23rd February 2019. Total 68 participants from 36 sugar mills were present during workshop. This workshop was deal with efficient use of available water, nutrient supply and agronomic practices followed during water stress condition. Water, nutrient and agronomic practices will play vital role in adverse climatic condition.

The event was inaugurated in presence of Mr. Vikas Deshmukh, Director, AST and Head of sections, VSI and representative from the sugar mills by lighting the traditional lamp. In inaugural speech, Director briefed the important practices and management carried during the water stress condition.

In the technical session, Mr. PV Ghodke delivered the lecture on 'Agronomic practices in sugarcane under water stress condition'. He explained about overview of situation during summer and drought period, agronomic practices to be followed in drought situation. Mr. PP Shinde, Scientist & Head, Agriculture Engineering Section, talked on 'Water management in sugarcane under water stress condition'. He pointed that untimely and uneven distribution of rainfall results in limitation of water availability. Water always plays a pivotal role in improving crop productivity and sugar recovery. He suggested different water management practices needs to be followed under limited water availability as well as water stress condition. Dr. Preeti Deshmukh, Scientist and Head, Soil Science section presented the topic on 'Nutrient management in sugarcane under water stress condition'. She stated about the ecological requirement of sugarcane crop. Generally, drought reduces both nutrient uptake by roots and its transport from root to the shoots because of restricted transpiration rates and impaired active transport and membrane permeability.


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biofertilizers produced at VSI and their benefits in cane productivity. Dr. SG Dalvi, Scientific Officer, Tissue Culture section gave information about Vasant-Urja, a biostimulator prepared by VSI in collaboration with BARC, Mumbai. He described its effect on increase in productivity and drought tolerance. Mr. GG Ukirde, Chief Agri. Officer, Shri Vighnagar SSK Ltd: Dist. Pune presented the ratoon management schemes implemented by the sugar mill. Mr. MR Bhadule, Chief Cane Development Officer, Vitthalrao Shinde SSK Ltd., Dist. Solapur told regarding cane development activities implemented by sugar mill especially during drought situation to

increase the cane availability in their operational area. In the concluding session, Mr. Vikas Deshmukh, Director, AST stated the present situation of ratoon crop under drought situation in the sugar mills area and its effect on recovery and average cane yield in Maharashtra state. Mr. Shivajirao Deshmukh, DG, VSI addressed to the gathering and expressed the need to give attention towards the increase the ratoon productivity by implementing best management practices, field demonstrations and various cane development schemes by each sugar mill for the benefit of farming community. The program was ended with a vote of thanks by Mr. PP Shinde.

Workshop on Sugarcane Crop Management under Water Stress Condition

The activity of monthly workshop is well admired among the cane officers from the sugar mills in the state. As a part of the extension activity the monthly workshop was organized on 'Sugarcane crop management under water stress condition' on 23rd February 2019. Total 68 participants from 36 sugar mills were present during workshop. This workshop was deal with efficient use of available water, nutrient supply and agronomic practices followed during water stress condition. Water, nutrient and agronomic practices will play vital role in adverse climatic condition.

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under moisture stress condition, fertilizer application should aim at developing a deeper root system and adequate tillering before water/moisture stress. During the moisture stress period, foliar application of fertilizers is only useful and emphasized fertilizer should apply in soil after achievement of favorable moisture level with availability of water in the canal or by southwest monsoon rain.

The representatives from sugar mills viz. Shri Chhatrapati Shahu SSK, Samarth SSK, SMSMP SSK and Jawahar SSK explained the efforts made by them to save sugarcane crop during the water stress condition and the sugarcane response by application of foliar application of multi micro nutrient and multi macro nutrient fertilizer in sugarcane.

Dr. RS Hapase, Principal Scientist & Head, Plant Breeding section, briefed the progress of promotional award scheme and aware for the next month workshop on promotional cane development award. All Head of sections discussed with the participants for various issues related workshop. The programme was concluded with a vote of thanks with following recommendation;

1. In standing sugarcane, de-trashing of dried leaves can be followed by leaving 3 to 4 border rows or followed by mulching intercropping with suitable green manuring crops. In wider row and paired row planting method the light inter-cultivation / harrowing operation may be done. Mulching helps to reduce the loss of water from soil through evaporation and saves 25 to 30% water.
2. *In situ* trash mulching should be done in ratoon crops. *In situ* trash mulching without shredding is a highly useful technique to conserve soil moisture and reduce the impact of moisture stress and atmospheric draught.
3. In paired row planting, the Irrigation should be applied through a long furrow between the rows

of sugarcane. In conventional system a long furrow method, irrigate the crop in alternate furrows. In wider row planting method, irrigate all the furrows up to final earthing-up and there after follow alternate furrow irrigation.

4. Drip and raingun sprinkler irrigation can be effectively used for survival of sugarcane crop in water stress condition.
5. Combined foliar application of Urea and Murate of Potash (White potash) each at 2.0% concentration (2.0 kg Urea + 2.0 kg Potassium in 100 lit. of water) at 15-20 days interval is helpful to retain more number of vigorous shoots till the moisture conditions become favourable.
6. Foliar application of VSI's multi-macronutrient and Multi-micronutrient 2 lit/acre in 200 lit. water at 60 days after planting and 3 lit./ acre in 300 lit. water at 90 days after planting along with Vasanturja, a biostimulator @ 5 ml/lit. of water during both the applications boosts the growth of sugarcane.
7. In water stress condition, foliar application of plant health @1 lit/acre mixed with 200 lit. water at 75 days after planting and ratooning can also work for fixing the atmospheric nitrogen efficiently and it will sustain the growth of sugarcane.

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- **WORKSHOP ON SUGARCANE CROP MANAGEMENT UNDER WATER STRESS CONDITION (23rd February 2019)**



Lightning of the lamp by the guest during the inauguration of the programme on crop management under stress conditions (23rd February 2019)




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VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

Date: 22/01/2019

CIRCULAR

All the students are hereby informed that Institute is organizing a one-day workshop on 'Multi-Ratooning in sugarcane and in situ trash management' was on 25th January 2019.

All the students are invited for the above workshop.




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VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

25/01/2019


Activity Name: Multi-Ratooning in Sugarcane and in situ Trash Management

Activity scope: The make aware about trash management in sugarcane cultivation

Activity details:

A one-day workshop on 'Multi-Ratooning in sugarcane and in situ trash management' was organized at Vasantdada Sugar Institute, Pune on 25th January 2019. Total 87 participants from 37 sugar mills of Maharashtra were attended the workshop. Mr. Vikas Deshmukh, Director, Agricultural Sciences & Technology and Head of the sections from VSI inaugurated the workshop by lightening the lamp. Mr. PV Ghodke, Scientist & Head, Agronomy Section in his, welcome speech highlighted the background and importance of topic of the workshop.

In the technical session, Mr. PV Ghodke made a presentation on 'Multi-ratooning in Sugarcane and in situ trash management.' He highlighted the benefits of ratoon crop, factors affecting low productivity and described advanced cultivation technologies in ratoon management. He suggested appropriate selection of sugarcane variety having good ratoonability, planting season and integrated ratoon management practices viz., trash mulching, stubble shaving, off barring nutrient management with crow bar, with foliar application of liquid fertilizers and biofertilizers are the important components for successful ratoon crop production. Dr. Preeti S. Deshmukh, Scientist & Head, Soil Science Section, talked on 'Efficacy of macro and micro nutrients as foliar application on sugarcane crop' and emphasized on fertilizer application on the basis of soil testing.


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industry in republic of Fiji, in future. Mr. Shivajirao Deshmukh, DG, VSI, put forth the final remark in the valedictory function. He thanked all who concerned to conduct of course and expressed his views about the

prosperity of the sugar industry in Fiji. He also assured to help Fiji Sugar Corporation in days to come as regards to cane development and to improve efficiency of the sugar mills in Fiji. The function concluded with vote of the thanks by Mr. BH Pawar.



WORKSHOP

Multi-Ratooning in Sugarcane and *in situ* Trash Management

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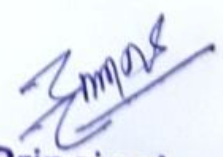


• **MULTI-RATOONING IN SUGARCANE AND IN SITU TRASH MANAGEMENT (25th January 2019)**



Questionnaire section & discussion after the programme, Director General, VSI Mr. Shivajirao Deshmukh present in the dias (25th January 2019)




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VASANTDADA SUGAR INSTITUTE

Manjari (Bk), Pune- 412307, Maharashtra

Continuous activity each year

Activity Name: Soil testing

Activity scope: To analyse the soil samples and helping farmers and sugar mills in fertilizer management

Activity details:

Soil Science section of agricultural sciences and Technology Division of VSI established in 1986. The section has achieved significant success in research activities like site specific nutrient management, soil test crop response targeted yield approach, soil fertility management, GPS-GIS based soil fertility mapping, sulphur and silicon nutrition and formulation of agro-products. The section is engaged in development of organic sugarcane package, management of salt affected soil, use of humic acid and nano formulation. This section also deals with training & extension services to the sugar mills on sugarcane development at micro level and disseminates the information on soil and fertilizer management practices to increase the average sugarcane productivity and sugar recovery. Efforts are taken to promote application of fertilizers through drip irrigation and foliar application in sugarcane for increasing fertilizer use efficiency keeping this in view the section has formulated the fertilizers like Multi-Micro-Nutrient, Multi-Macro-Nutrient Liquid Fertilizers for foliar application, VSI-Microsol for fertigation and soil application which are available to the farmers through sugar mills and also in the Institute.

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Facility for soil testing



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असतो मा सद्गमय" इत्युक्तं शिवायाम् ।
"यस्यै न स्यात्तु पुनः" इत्युक्तं शिवस्य ।
कर्मयोगी सुधाकरपंत परिचरारक
पांडुरंग सहकारी साखर
कारखाना लि; श्रीपूर
पु.सं.श्रीपूर, त.हावेली, जि.सांगली पिन नं. ४१११११

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IAF

Out No - 153 /Agr / 2023-24 Date- 28/11/2023

To
Director General,
Vasantdada Sugar Institute Manjari (Bk),
Tal-Haveli, Dist-Pune- 412 307

Subject:- Benefits of Soil testing laboratory established at factory site.

Dear Sir,

We have established soil testing laboratory at factory site under technical guidance of soil science section.

Presently we have provided soil analysis service of farmers of fertilizer management in sugarcane. It has been observed that Sugarcane yield increasing in the operational area of sugarcane mil.

With regards,

Yours sincerely
Dr.Y.S.ulkarni
MANAGING DIRECTOR

Office : 02116122623,29514 97168449
Website : www.pandurangusugar.com

E-mail : pandurangusugar@gmail.com
E-mail : spsk_sugar@yahoo.com

Appreciation received from sugar industry for soil testing facility at VSI

Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307

