

visit us at : <http://www.nsi.gov.in>contact: nsikanpur@nic.in**48th CONVOCATION:**

The 48th Convocation of National Sugar Institute, Kanpur was held on 8th September, 2016 in the auditorium of the Institute. Hon'ble Shri Ram Vilas Paswan, Union Cabinet Minister, Ministry of Consumer Affairs, Food & Public Distribution, Govt. of India graced the occasion as Chief Guest. Shri Devendra Singh "Bhole", Hon'ble Member of Parliament from Kanpur was the Guest of Honour.



In his welcome address, Prof. Narendra Mohan, Director of the Institute thanked Hon'ble Minister for sparing his valuable time and hoped that his gracious presence on the occasion would certainly provide extra energy amongst faculty members, staff and students of this Institute. He also thanked Guest of Honour, Shri Devendra Singh "Bhole", M.P. for humbly accepting invitation for the occasion. Welcoming the diploma and certificate recipients, he wished them a bright future in the coming years.

While inaugurating the ceremony the Hon'ble Minister said that he was extremely happy by coming over to this 48th Convocation of National Sugar Institute Kanpur which was being held after 2008 and congratulated the students who received

the diplomas / certificates after completing their studies from this Institute and wished them bright future and successful career.



He added that every student should utilize the theoretical and practical knowledge gathered at the Institute for not only choosing and advancing their career but also work for the betterment of the sugar and allied industry.



During the convocation, Hon'ble Minister also distributed gold medals and cash awards to meritorious students. The Mahatma Gandhi Memorial Gold Medal of Govt. of India was given to the following students for obtaining first position in the ANSI (Sugar Technology) final year examination:

1. Mukul Mishra (2015)
2. Raju Naushad (2014)
3. Maruti Nandan (2013)
4. Vineet Kumar Mishra (2012)
5. Devesh (2011)
6. Anuj Kumar (2010)
7. Sudhriti Dey (2009)
8. Mohit Kumar (2008)



In addition to above, Dr. S. Mukherjee Memorial Gold Medal sponsored by the family of late Dr. S. Mukherjee for obtaining highest marks in Organic Chemistry in ANSI (Sugar Technology) First year examination and cash awards sponsored by NFCSF & ISMA were also given. Besides above, “Shreejee Future Leader Award” along with cash prize was also given to the students of ANSI (Sugar Technology) 1st yr. and ANSI (Sugar Engineering) 2nd yr. courses.



NANO BREWERY & ANALYTICAL LABORATORY INAUGURATED:

During his visit to the institute, Hon'ble Shri Ram Vilas Paswan, Union Cabinet Minister, Ministry of Consumer Affairs, Food & Public Distribution, Govt. of India also inaugurated the “Nano Brewery” and “NSI Analytical Laboratory”.



The “Nano Brewery” has been set up to impart practical training to the students of Alcohol Technology course and also to conduct experiments on beer recipe's. Within few months, an Ethanol Pilot Plant for teaching, training and research purposes shall also be installed, Prof. Narendra Mohan, Director added.

The “NSI Analytical Laboratory” has been set up to seek NABL Accreditation and to facilitate the sugar



industry for analysis of sugar and sugar house products at very reasonable charges.

REFRESHER COURSE:

To enhance & refresh the knowledge of the in-service technologists and engineers of the sugar industry, five days Refresher Course was organized at the Institute from 4th – 8th July, 2016 which was inaugurated by Dr. N. Eshwara Prasad, Director, DMSRD, Kanpur.



During the refresher course, 24 lectures were delivered by the Institute’s faculty and other

eminent experts from the industry on the important topics of Energy Conservation, High Pressure Co-generation, Water Conservation, Alternate Feed Stocks for Ethanol Production, Refined Sugar Production and on Environment issues. Large no. of participants from the sugar producing states of U.P., Uttarakhand, Gujarat, Maharashtra, Haryana, Punjab, Karnataka, Tamil Nadu, Andhra and Telangana states attended the course.



INTERNATIONAL SYMPOSIUM:

An International Symposium on “Opportunities and Challenges from the Emerging Bio-Economy for the Sugar Sector” was organized by the Institute jointly with M/s Global Cane Sugar Services Pvt. Ltd., New Delhi on 9th July, 2016 at NSI, Kanpur.



Eminent experts Mr. Malcom Topfer, Expert, Sugar Knowledge International Ltd., UK, Dr. Jan Zhang, Sr. Research Fellow, Queensland University of Technology, Australia, Dr. Michael Saska, Ex. Professor Audobon Sugar Institute, University of Louisiana, USA and Mr. A. Chudasama, Editor, International Sugar Journal, London, UK delivered lectures during the symposium on the topics of

“The Technology available for producing refined sugar”, “Sucrose losses in cane storage, colour removal and sucrose loss in juice clarification and quality issues upon storage of sugar”, “Need for developing bio-fuels and bio-chemicals for sustainable profitability of sugar factories” “Bio-fuel production using sugarcane industry by-products and process of production of cellulosic ethanol using various pre-treatment and fraction techniques” respectively.



Earlier in his address, Prof. Narendra Mohan, Director, NSI emphasized upon conversion of sugar factories from single product to multi product and ultimately to “Bio-refineries”.

On this occasion, Dr. Bakshi Ram, Director, Sugarcane Breeding Research Institute,

Coimbatore, Tamil Nadu also presented highlights of breeding programme undertaken by the ICAR and Sugarcane Breeding Institute for “Energy cane Breeding Programme”. Summing up the proceeding of the symposium, Dr. G.S.C. Rao, Managing Director, M/s Global Cane Sugar Pvt. Ltd., New Delhi presented a 4-B model for the sugar mills producing bio-diesel, bio-ethanol, bio-electricity and bio-manure.



TRAINING PROGRAMME: Institute going global.....

For M/s Yemen Company for Sugar Refining, Hodeidah, Republic of Yemen:

On the request of M/s Yemen Company of Sugar Refining, Hodeidah, Republic of Yemen, three month technical training for their production staff commenced at the institute. The theoretical and practical training is being imparted in a manner that the deputed personnel may acquire knowledge about the latest technology of sugar refining with focus on measures to be taken to reduce cost of production.

RESEARCH:

The Institute during the period took up R&D work on the following:

1. **An investigation on standardization of suitable and cost effective pretreatment methodology of bagasse for isolation of pure cellulose, hemi-cellulose & lignin for utilization as fermentable sugars** – To assess the effect of different pre-treatment process and their

combination on cellulose, hemi-cellulose and lignin separation from ligno-cellulose. Cellulose, hemi-cellulose and lignin separated by using grinding/milling, ultra sonication in combination with different chemicals. Purity of cellulose, hemi-cellulose and lignin separated through organsol, basic and acid treatment along with ultra sonicator will be tested further through HPLC.



2. Isolation and purification of yeast strains from saccharine materials and their performance for fermentative production of alcohol–

Various saccharine materials are being screened for carrying out isolation work. The isolation of yeasts has been started and good growth of cells was seen with different raw materials except for sunflower and marigold. The purified yeasts obtained from apple and mango by streak plate and spread plate method is in progress.



3. Production of invert syrup from Cane Juice, Molasses, Sweet Sorghum & Sugar Beet Juice - The expressed sugar cane juice has been treated with different concentrations of Aloe Vera

extract and then subjected to ion exchange treatment (cation first and anion later on). The syrup thus obtained has been analysed for % inversion and colour reduction. The clarification shall also be done by Moringa and Hibiscus species, after which it shall be treated with ion exchange resins.

4. Graphene oxide from bagasse: synthesis & its utilization in carbo-catalysis –An effort has been made to evaluate the synthetic efficacy of bagasse dried graphene oxide as catalyst. A manuscript entitled “Graphene oxide from bagasse: synthesis and its utilization in carbo-catalysis” will be presented under co-product session at 29th ISSCT Congress, to be held in December, 2016 at Bangkok, Thailand.

5. Studies on sugar assisted synthesis of Graphene–The synthesized reduced Graphene oxide (rGO) as a model compound from Graphene oxide following literature method (by the use of dextran as reducing agent) has been completed and the characterization of synthesized rGO is under process.



6. Improvement in Sugar Quality by clarification of intermediate boiling house products - Further trials for melt clarification using different settling aids and centrifugation are in progress. Approx. 5-7% reduction in ICUMSA colour value has been observed. Treatment of B-heavy molasses was carried out by application of flocculants and centrifugation. Encouraging results were obtained in terms of turbidity removal. Further, experiments will be carried out in the crushing season 2016-17.

7.Production of Bio-CNG from Press Mud- Blue print for under taking pilot/ prototype scale trials in the Experimental Sugar Factory using press mud with or without spent wash has been prepared. Details of homogenizer and reactor have been worked out and trails are proposed to be taken in January- February 2017.

SCIENTIFIC SOCIETY FUNCTION:

The inaugural function of the Scientific Society under the Council of Student's Activities was organized on 16th September, 2016 at National Sugar Institute, Kanpur. Shri Sanjay Awasthi, Business Head, ISGEC, Noida inaugurated the function.



In his address Shri Sanjay Awasthi called upon the students to develop themselves into competent technologists and engineers by taking full advantages of experienced faculty, vast infrastructural facilities and huge library.

A Poster/Model Competition on “Concept of ZLD based Distillery”, “Water conservation in Sugar industry” and “Energy conservation to boost Power export in sugar industry” and competition on Scientific Presentations on “Role of Sugar Industry in Rural Development”, “Sugar Factory and Environmental Concerns” and “Better Profitability of Sugar Industry through By-Product Utilization” was organized on this occasion.

Winners of Scientific presentation:

1. Shri Shivam Behl ANSI (ST) IIIrd year—First
2. Shri Vikas Gupta ANSI(SE) IInd year—Second
3. Shri Sumit Shukla ANSI(ST) IIIrd year—Third

Winners of Poster competition:

1. Km. Shikha Singh—DIFAT IInd year—First
2. Km. Pushpanjali -ANSI(ST) IIIrd year—Second
3. Shri Shikhar Mishra-ANSI(ST) Ist year—Third



Winners of Poster competition:

1. Km. Shikha Singh—DIFAT IInd year—First
2. Km. Pushpanjali-ANSI(ST) IIIrd year—Second
3. Shri Shikhar Mishra-ANSI(ST) Ist year—Third

In addition to above a model on “ZLD in Molasses based Distillery” was also chosen for consolation prize. Following were the winners of Model Competition:

1. Shri Prashant K. Dixit-DIFAT
2. Shri Rajeev K. Yadav-DIFAT
3. Shri Abhishek Shukla-DIFAT
4. Shri Saurabh Kumar- DIFAT



SEMINARS/CONVENTION ATTENDED:

1. Prof. Narendra Mohan, Director, Dr. Ashutosh Bajpai, Prof. Sugar Technology, Shri J.P. Srivastava, Chief Design Engineer, Shri Sanjay Chauhan, Asst. Prof. Sugar Engineering, Shri Anoop Kanaujia, Asstt. Prof. Sugar Engineering,

Shri MahendraYadav, Junior Technical Officer (Sugar Technology), Shri Vivek Pratap Singh, Junior Technical Officer (Sugar Technology) and Shri Brajesh Singh, Technical Officer (Instrumentation) attended the 74th Annual Convention of STAI at New Delhi from 27th-29th July, 2016.

2. Director, NSI, Kanpur attended the 46th annual convention of SISSTA, at Chennai, Tamil Nadu, on 15th-16th July, 2016 and also inaugurated the Expo.



Dr. V.P. Srivastava, Asstt. Prof. Organic Chemistry and Shri MahendraYadav, Junior Technical Officer (Sugar Technology) who accompanied the Director presented their research paper during the 46th Annual Convention of SISSTA at Chennai, Tamil Nadu.

3. Director, NSI, Kanpur delivered lecture on “Ethanol Outlook” organized on 22-23rd August, 2016 at New Delhi and also participated in the panel discussions on: “Indian Fuel Ethanol Programme-The Way Forward”.

4. Shri S.K.Trivedi, Assistant Prof. Sugar Technology and Shri Anoop Kanaujia, Assistant Prof. Sugar Engineering attended the workshop on “Concentrating Solar Thermal Technologies for Industries” jointly organized by Confederation of Indian Industry with M/o New and Renewable Energy, Govt. of India on 22nd July, 2016 at Lucknow.

EXTENSION LECTURES:

1. Shri Anup Kesarwani, Managing Director, M/s Chemical Systems Ltd., New Delhi delivered a

lecture on “Sugar Refinery Practices” on 26th August, 2016.



2. Dr. Brajesh Singh, Associate Professor, HBTU, Kanpur delivered a lecture on “Technological Advancement in Bio-Ethanol Production” on 30th August, 2016.



3. Shri Vivek Verma, Managing Director, M/s Spray Engineering Devices Ltd., Chandigarh delivered a lecture on “Energy Conservation” on 5th September, 2016.



4. Shri Mahesh Kulkarni, AVP-Innovation & Business Development, of M/s Praj Industries Ltd., Pune delivered a lecture on “Recent Advancement in Fermentation & Distillation Techniques” on 15th September, 2016.



5. Dr. (Mrs.) Vasudha Kesar, Vice President, ICUMSA delivered lectures on “Sugar Colour Determination by ICUMSA method” and “Colour balance in a Sugar Factory” on 22nd September, 2016.



6. Shri Rajeev Gupta, General Manager, M/s Jindal Steels Ltd., New Delhi delivered a lecture on “Types of Stainless Steel and their application in industry” on 27th September, 2016.



7. Shri Rohit Kumar, Executive Director, Indian Stainless Steel Development Association, Gurgaon delivered a lecture on “Use of Stainless Steel in

Fabrication of Sugar Industry Equipments” on 28th September, 2016.

FELICITATIONS:

1. Research paper entitled “Bagasse Gasification” presented by Prof. Narendra Mohan, J.P. Srivastava & Anoop Kumar Kanaujia during the Joint Annual Convention of STAI & DSTA at Goa was conferred with prestigious Dr. Bansi Dhar Gold Medal award in 74th Annual Convention of STAI held on 27-29th July, 2016 at New Delhi. H.E. Smt. Pratibha Patil, Former President of India gave the medal and citation to the NSI team.



2. Research paper on “Production of Sulphur-less Sugar by use of Carbon dioxide gas from distillery Fermenters” presented by Prof. Narendra Mohan, A. Bajpai and N. Deo during the 11th Joint Annual Convention of STAI & DSTA at Goa from 4-6th September, 2015 was awarded STAI Silver Medal during the 74th Annual Convention of STAI held on 27-29th July, 2016 at New Delhi.

RESEARCH PAPERS PUBLISHED/SENT FOR PUBLICATION:

1. “Efficient water conservation treatment and systems in cane sugar factories : A need of the hour” by Narendra Mohan, V.P. Srivastava, Mahendra Yadav and V.S. Maurya presented during the Annual Convention of SISSTA held on 15-16th July, 2016 at Chennai.

2. “Efficiency enhancement of sugar dust collection system” by Sanjay Chauhan presented during the

Annual Convention of STAI held on 28-30th July, 2016 at New Delhi.

3. “Ozonation: An alternative to Sulphitation”, by V.P. Singh, Jahar Singh and P. Sanyal presented during the Annual Convention of STAI held on 28-30 July, 2016 at New Delhi.

4. “Ethanol Production in India- Looking beyond” by Narendra Mohan, published in 62nd Annual Convention of DSTA held on 12-13th August, 2016 at Pune.

5. “Production of Invert sugar syrup from cane juice using natural clarificants and citric acid” by Vinitanjali Banerjee, Santosh Kumar and Seema Paroha published in Annual Convention of STAI held on 28-30th July, 2016 at New Delhi.

6. “Sugar Industry & Ethanol Blending Program- Opportunities & Challenges” by Narendra Mohan presented during “Ethanol Outlook” organized on 22-23rd August, 2016 at New Delhi.

7. “Energy Efficiency in Sugar Mills” by Narendra Mohan and J. P. Srivastava sent for presentation during forthcoming seminar of STAI at Amritsar on 14th October, 2016.

8. “Reducing Steam Consumption in boiling house- An overview” by M P Singh, A Bajpai and N Mohan sent for presentation in forthcoming seminar of STAI at Amritsar on 14th October, 2016.

CONSULTANCY SERVICES:

During the period July-September, 2016 consultancy services were provided to the following:

1. M/s Padambhushan Krantiveer Dr. Nagnathanna Nayakwadi Hutatma Kisan Ahir SSK Ltd., Sangli, Maharashtra

2. M/s Narmada Sugar Pvt. Ltd., Narsinghpur, M.P.

3. M/s Durga Khandsari Sugar Mills, Badwani, M.P.

4. M/s The Panipat Coop. Sugar Mills Ltd., Haryana

5. M/s Subramaniya Siva Coop. Sugar Mills Ltd., Gopalpuram, Tamil Nadu

6. M/s Kalakurichi-II Coop. Sugar Mills Ltd., Kachirapalayam, Tamil Nadu

7. M/s The Panipat Coop. Sugar Mills Ltd., Distillery Unit, Panipat, Haryana

8. M/s NSL Sugar Ltd., Unit-III, Jaimahesh, Beed, Maharashtra

9. M/s NSL Sugar Ltd., Unit-II, Bhusnoor, Gulbarga, Karnataka

10. M/s Shree Kantha Vibhag Sahkari Khand Udyog Mandli Ltd., Surat, Gujrat

11. M/s KSCM Ltd., Powayan, Shahjahanpur, U.P.

12. M/s Bisalpur KSCM Ltd., Bisalpur, U.P.

13. M/s Shree Balaji Sugars & Chemicals Ltd., Bijapur, Karnataka

14. M/s Rudra Bilas KSCM Ltd., Rampur, U.P.

15. M/s Shri Vadodara District Coop. Sugarcane Growers Union Ltd., Gujarat

16. M/s UP Coop. Sugar Factories Federation Ltd., Lucknow, U.P.

17. M/s The Bhogpur Coop. Sugar Mills Ltd., Jalandhar, Punjab

18. M/s Kichha Sugar Co. Ltd., Udham Singh Nagar, Uttara Khand

19. M/s Dhampur Sugar Mills Ltd., Rajpura, U.P.

20. M/s The Haryana State Federation of Coop. Sugar Mills Ltd., Panchkula, Haryana

21. M/s Siddhi Sugar & Allied Industries Ltd., Mahesh Nagar, Ujana, Tq. Ahmedpur, Maharashtra.

PREPARATION & SALE OF SUGAR STANDARDS GRADES:

The Committee of Experts constituted by the Government of India under the Chairmanship of Director, National Sugar Institute met on 28th September 2016 at the Institute to approve the Sugar Standard Grades for the crushing season

2016-17. The sale of Sugar Standards Grades will commence from 1st October, 2016. Details shall be available on our website <http://www.nsi.gov.in>



The Deputy Director, M/o Consumer Affairs, Food & Public Distribution, Director IISR, Lucknow and representatives from Bureau of Indian Standards and FCI attended the meeting.

GLIMPSES OF VARIOUS ACTIVITIES: ORIENTATION PROGRAMME/FRESHER'S PARTY/TEACHER'S DAY/ VISHWAKARMA POOJA:



Fresher's Party



Teacher's Day



Vishwakarma Pooja

INDEPENDENCE DAY:

On 70th Independence Day, the Director, hoisted the National Flag at the Institute and addressed the staff and students. Attitude, discipline and dedication are keys to success. Only a positive attitude can bring about a change and success, he said.



A Kavi Sammelan "Jashn-E-Azadi" was also organized on this occasion under the auspices of "Council of Students Activities" in association with "Khwahish Foundation".

VISITORS FROM ABROAD:

Scientists from Murata (Japan) and IIT visited the institute to work jointly with NSI for development of sensors for sugarcane crop. The sensors to be developed for determining soil health and to indicate any attack of diseases. The team visited the institute farm and thereafter discussed the matter in detail with institute officials to explore possibilities for development of sensors and their trials at institute farm.



ANNUAL SPORTS 2016:

Annual Sports under the auspices of Sports Society Council of Students Activities were organized from 10th to 24th September, 2016 at the Institute. Besides team events e.g. Inter Class Cricket & Volleyball, individual events for Chess, Table Tennis, Badminton and Athletics etc. were also organized. Boys & Girls studying in the various courses actively participated in the competitions.



Winners (Boys) of indoor and outdoor games are as under:

Event	Winner
Badminton (Single)	Shobhit Tyagi -ST-1 st yr.
Badminton (Doubles)	Ajit Singh-ST-1 st yr.
Table Tennis	Robin Adhikari-DIFAT-2 nd yr.
Badminton(Doubles)	Satya Sunder Swain-ST 1 st yr.
Chess	Abhishek Shukla-DIFAT-2 nd yr.
Cricket	SBCC Team
Javellin Throw	Ankit Kumar-ST-2 nd yr.
Discus Throw	Atul Sharma-SE-1 st yr.
High Jump	Shobhit Tyagi-SE-1 st yr.
Weight Lifting	Deepak Kumar-DIFAT-1 st yr.
Athletics(100& 200 M)	Vineet Tomar-SBCC
Volleyball	SBCC Team

Long Jump	Ankit Kumar-SE-2 nd yr.
Carom	Mayank Mathur-ST-2 nd yr.



Winners (Girls) in various indoor and outdoor games are as under:

Event	Winner
Badminton (Single)	Shikha Singh-DIFAT-2 nd yr.
Chess	Akanksha Mishra-ST-Final yr.
Table Tennis	Shikha Singh-DIFAT-2 nd yr.
Athletics (100M)	Anjali Kanaujia-ST-Final yr.
Javelin Throw	Shikha Singh-DIFAT-2 nd yr.
Carom	Shikha Singh-DIFAT-2 nd yr.
Long Jump	Puspanjali-ST-Final yr.
Shot put	Ekta Yadav -ST-1 st yr.

हिंदी पखवाड़ा

सरकारी कामकाज में राजभाषा के रूप में हिंदी के प्रति जागरूकता लाने तथा उसके उत्तरोत्तर विकास हेतु संस्थान में 16 से 30 सितंबर, 2016 तक हिंदी पखवाड़ा मनाया गया तथा 26 सितंबर, 2016 को आयोजित पुरस्कार वितरण समारोह में संस्थान के निदेशक, प्रो. नरेन्द्र मोहन ने इस बात पर जोर दिया कि राजभाषा के प्रचार-प्रसार हेतु दृढ़ इच्छाशक्ति का होना अत्यधिक आवश्यक है।



कानपुर विद्या मंदिर, कानपुर की प्रधानाचार्या डा. विनीता पांडेय ने हिंदी की वर्तमान दशा पर चिंता व्यक्त करते हुये कहा कि हिंदी के प्रयोग पर बल देने से ही राजभाषा का विकास संभव हो सकेगा। इसके लिये उन्होंने अन्य देशों का उदाहरण भी प्रस्तुत किया और कहा कि हमें हिंदी के प्रति अपनी मानसिकता को बदलना होगा।



हिंदी पखवाड़े के दौरान आयोजित विभिन्न प्रतियोगिताओं में निम्न संस्थानकर्मी प्रथम रहे-

क्र.	प्रतियोगिता	प्रथम विजेता
1.	हिंदी टिप्पण/आलेखन	संजय तिवारी
2.	हिंदी निबंध	दया शंकर मिश्र
3.	हिंदी निबंध (एम.टी.एस.)	पीयूष त्रिवेदी
4.	हिंदी टंकण	रमाकांत
5.	हिंदी प्रचार-प्रसार	डा. लोकेश बाबर
6.	हिंदी सामान्य ज्ञान	श्रीराम तिवारी
7.	हिंदी सामान्य ज्ञान प्रश्नोत्तरी	नरेन्द्र सिंह नयाल

रक्तदान शिविर:

संस्थान में 27 सितंबर, 2016 को मायांजलि चैरिटेबल ब्लड बैंक तथा रोटरी क्लब, कानपुर के सहयोग से रक्तदान शिविर का आयोजन किया गया। इसमें संस्थान के 55 अधिकारियों, कर्मचारियों एवं छात्र व छात्राओं द्वारा रक्तदान किया गया।



E-GOVERNANCE INITIATIVES:

The institute undertook participated in the video conferencing on 10th August 2016 through with Hon'ble President of India addressed the Vice Chancellors and Directors of various universities, Technical Institution and Institutions of higher learning on the topic of "Innovations".



PLACEMENTS:

Campus interviews were conducted by the following sugar factories and other companies to recruit students of various courses during the period:

1. M/s Global Cane Sugar Services Ltd. New Delhi.
2. M/s Daurala Sugar Works Ltd. Meerut, U.P
3. M/s Balrampur Chini Mills Ltd. Balrampur, U.P
4. M/s DSCL Sugar Ltd. U.P
5. M/s Dalmia Chini Mills Ltd. U.P
6. M/s NAO Breweries Pvt Ltd. New Delhi
7. M/s ISGEC Ltd. Noida, U.P

