



Newsletter

National sugar Institute, Kanpur-208017

SEMINARS ORGANIZED:

1. A National Seminar on **“Sugarcane Energy Utilization Technologies – Present, Emerging & Future”** was jointly organized by the Institute with M/s J. P. Mukherjee & Associates Ltd., Pune on 17th October, 2015 at Pune, Maharashtra. The Seminar was attended by large no. of delegates from Maharashtra, Karnataka, Tamil Nadu, Gujarat & UP. The Director, NSI delivered the inaugural lecture during the seminar and emphasized upon energy conservation through use of newer technologies, process instrumentation & control. Shri M.S. Sundaram, Managing Director, M/s JP Mukherjee & Associates Ltd., Pune while delivering the welcome address stressed upon need for adoption of many newer energy efficient technologies particularly at Juice Extraction, Cooling and Condensing stages. During the seminar 10 papers were presented. The presentation covered various sugarcane energy utilization technologies, innovative e.g. production of CNG from Press Mud, Bagasse Drying and on exploring potential of alternate feed stocks for Ethanol production.



2. Another National Seminar on **“Exploring Alternate Feed Stocks and Addressing Environmental issues in Distilleries”** was jointly organized with All India Distillers Association, New Delhi on 19th November, 2015 at NSI, Kanpur. The Seminar was inaugurated by Prof. S.K. Gupta, Ex Director, NSI, Kanpur who lauded the role of National Sugar Institute in addressing the issue of by product utilization in an innovative manner.

Shri V.N Raina, Director General, AIDA while delivering Inaugural address informed the delegates about the role of AIDA in propagating newer technologies and on policy matters. Large no. of delegates from Maharashtra, Karnataka, Gujarat, UP and Haryana attended the Seminar. During the seminar eminent experts from Alcohol & Brewery Industries made their presentation on the important topics viz. Diversion of B-Heavy molasses & use of alternate feed stocks for alcohol production, installation of incineration boiler and adoption of ferti-irrigation etc. to achieve ZLD.



FARMER'S MEET:

A Kisan Goshthi was organized by the Institute on “Importance of Potash Fertilizer in Sugarcane Quality & Production” on 17th November, 2015 at Institute Farm. Large no. of farmers from Kanpur & adjoining areas participated in the Goshthi.



The farmers were educated on the role of potash and other micronutrients to enhance sugarcane productivity. Farmers were also briefed on newly high yielding & high sugared sugarcane varieties developed for subtropical region.



PARTICIPATION IN SEMINARS, CONFERENCES & TRAINING PROGRAMME :

1. Dr. Santosh Kumar, Asstt. Prof. Bio-Chemistry presented a research paper during an All India Seminar on “Fermentation and Distillation Technologies to improve Alcohol Recoveries and Production”, “Water and Energy Conservation in Distilleries”, Effluent Treatment Technologies to

achieve Zero Spent Wash Discharge” (ZSD) organized by All India Distillers Association on 8th - 9th October, 2015 at Bengaluru.

2. Shri D. Swain, Prof. Sugar Engineering, Shri S.K. Trivedi, Asstt. Prof. Sugar Technology and Shri Vinay Kumar, Asstt. Prof. Sugar Engineering attended an All India Business Meet on “Promotion of Bagasse Based Co-gen Power Plants” organized by MNRE and Cogeneration Association of India on 8th October, 2015 at Lucknow, UP.

3. Shri Narendra Mohan, Director and Shri Vinay Kumar, Asstt. Prof. Sugar Engineering attended an All India Business Meet on “Promotion of Bagasse based Co-gen Power Plants” organized by MNRE and Cogeneration Association of India on 10th October, 2015 at Dehradun, Uttarakhand.

4. Dr. Lokesh Babar, Jr. Scientific Officer, Agri. Chemistry attended 08 days Model Training Course on “Advances in Sugarcane Agri-Business Management Systems” sponsored by Ministry of Agri. & Farmers Welfare, Govt. of India from 6-13th October, 2015 at Indian Institute of Sugarcane Research, Lucknow.

5. Shri Narendra Mohan, Director delivered a lecture during the National Workshop on “Water Recycling & Pollution Control in Sugar Industry and its Management” on 31st October, 2015 at DAV-PG College, Kanpur.

6. Dr. Jahar Singh, Asstt. Prof. Sugar Technology and Education In-charge attended a workshop on “To sensitize the Management and Teachers of Technical Institutions to ensure time bound implementation of various measures to be taken the meanace of Sexual Crime against women” organized by All India Council for Technical Education on 28th November, 2015 at Lucknow.

In addition to these, the faculty members were deputed to various technical institutes/organizations for interactive meets.

RESEARCH PAPERS PUBLISHED / SENT FOR PUBLICATION-

1. **“Alternate Feed Stocks for Alcohol Production-Achieving EBP success”** by S. Kumar, S. Paroha and N. Mohan presented during the All India Seminar organized by All India Distillers Association from 8-9th October, 2015 at Bengaluru.

2. **“Maximization of Ethanol Production through B-Heavy Molasses-A Recent Approach”** by Narendra Mohan, Seema Paroha and S. Kumar presented during the All India Seminar on “Sugarcane Energy Utilization Technologies – Present, Emerging & Future” jointly organized by the Institute with J.P Mukherjee & Associates Ltd. on 17 October, 2015 at Pune.

3. **“A Novel Approach to Optimize the Design of Power Processors of D C Drive for Milling Tandem in a Sugar Factory”** by Narendra Mohan, D. Swain, Anoop Kanaujia presented during the All India Seminar on “Sugarcane Energy Utilization Technologies – Present, Emerging & Future” jointly organized by the Institute with J.P Mukherjee & Associates Ltd. on 17 October, 2015 at Pune.

4. **“An Assessment of Economic Viability of Ethanol Production through selected alternate routes”** by S. Kumar, Seema Paroha and Narendra Mohan presented during the All India Seminar jointly organized by the Institute and All India Distillers Association on 19th November, 2015 at Kanpur.

5. **“Ethanol production for better health of Indian Sugar Industry”** by Narendra Mohan sent for publication in “Ethanol India.”

6. **“Sugar Cane Juice Clarification By Distillery Fermenter Gasses”** by Narendra Mohan, A. Bajpai and M. P Singh sent for presentation in XXIX ISSCT Congress, to be held in December-2016 in Thailand.

7. **“Feasibility of Ethanol Production in India through Alternate Feed Stocks”** by Seema Paroha and Santosh Kumar sent for presentation in XXIX

ISSCT Congress, to be held in December-2016 in Thailand.

8. **“Recycling of Pan and last body of Evaporator vapours by compressing with MVR and used in first effect of Evaporator.”** by Narendra Mohan and Mahenda Kumar Yadav sent for presentation in XXIX ISSCT Congress, to be held in December-2016 in Thailand.

9. **“Graphene Oxide from Bagasse: Synthesis and its utilization in Carbocatalysis.”** by Narendra Mohan and Vishnu Prabhakar sent for presentation in XXIX ISSCT Congress, to be held in December-2016 in Thailand.

10. **“Challenges, Future Requirements of Sugarcane Production and Productivity in India”** by Ashok Kumar & Lokesh Babar sent for publication in Indian Sugar.

CONSULTANCY SERVICES-

During October 2015 to December 2015 Consultancy Services were provided to following factories and organizations:

1. M/s Indreshwar Sugar Mills Ltd., Bhagwantnagar, Solapur, Maharashtra.

2. M/s Bannari Amman Sugars Ltd., Trichy Road, Coimbatore, Tamilnadu.

3. M/s Rajasthan State Ganganagar Sugar Mills Ltd., Sri Ganganagar, Rajasthan.

4. M/s Bidar Kisan Sakhar Karkhana Ltd., Bidar, Karnataka.

5. M/s Superior Food Grains P. Ltd., Chandigarh, Punjab.

6. M/s Markandey Coop. Sugar Mill Ltd., Kakati, Belgavi, Karnataka.

7. M/s Starwire (India) Vidyut Pvt. Ltd. Mahendergarh, Harayana.

8. M/s Jakraya Sugar Ltd., Watwate, Tal. Mohol, Dist. Solapur, Maharashtra.

9. M/s Balrampur Chini Mills Ltd., Dist. Balrampur, U.P.



10. M/s Yadeshwari Agro Products Ltd. Pavansootnagar Tal. Kaij, Dist. Beed, Maharashtra.

11. M/s Shri Malprabha Sahkari Sakkare Karkhane Niyamit, Mugutkhan, Hubli, Belgavi, Karnataka.

12. M/s U.P. State Sugar Corporation Ltd. Unit-Mohiddinpur, Meerut, U.P.

13. M/s Om Sugars Ltd., Belagavi, Karnataka.

RESEARCH:

The Institute, at present, is carrying out R&D work on the following:

1. Alcohol from Cassava- Studies have been undertaken on production of alcohol from cassava powder and chips using commercially available enzymes.

2. An investigation of deterioration pattern fermentability of B-heavy molasses for sustainable ethanol production- The study on deterioration of B-heavy molasses and final molasses has been carried out up to 120 days. For the purpose samples of B Heavy & final molasses were collected from 20 sugar factories from the states of U.P., Maharashtra, Karnataka & Tamil Nadu .

Factory trial on B-Heavy molasses for production of Ethanol was also carried out at M/s Dhampur Sugar Mills Ltd., Dhampur, Bijnor from 5-11-2015 to 7-11-2015 which indicated ethanol yield of 282 liters/ton of B heavy molasses.

4. Cane Juice Clarification by fermenter gases for production of sulphurless sugar-After conducting successful trials in tropical region, Lab trials with four different sugarcane varieties produced at NSI farm were carried out in sugar technology division laboratory & the results with respect to juice clarification were found encouraging and comparable to Sulphitation Process of juice clarification.

5. Gasification of Bagasse- Trials on gasification of bagasse having a moisture around 30% w/w were successfully conducted earlier at the works of M/s Ankur Scientific Energy and Technologies P. Ltd., Vadorara. Further, studies on a proto type of bagasse gasification unit are being planned.

6. Graphene Oxide from bagasse: synthesis and its utilization in carbo-catalysis- The work on the synthesis of Graphene Oxide from bagasse and its utilization in carbo-catalysis has been taken up.

7. Zeolite from bagasse fly ash : synthesis and its utilization in catalysis-Experiments have been performed to assess potential of zeolite from fly ash. The isolation and characterization of product is under process.

8. Study of fly ash as low cost colour adsorbent –The experimental set up has been established. The fly ash received from different factories have been sieved and dried, $K_2S_2O_8$ treated fly ash has also been prepared.

FARM ACTIVITIES

Three Sweet Sorghum varieties – CSH 22SS, SSV-84, CSV-24SS3 and two Sugar Beet varieties LS-6, CV-PAC 60008 have been sown at the Institute farm.



Studies shall be made with respect to yield, sucrose content and total sugar content etc. Under the subtropical conditions further laboratory trials shall also be conducted to assess potential of ethanol production from the sugar beet and Sweet Sorghum juice.

In addition to above Stevia cultivation has also been taken up at the Institute on experimental basis.

ISSUE OF SUGAR STANDARDS:

As approved by the Expert Committee on Sugar Standards, 7 Sugar Standards L-31, L-30, M-31, M-30, S-31, S-30 & SS-31 were released for the sugar season 2015-16. The details regarding prices and procurement are available on the Institute website www.nsi.gov.in



VIGILANCE AWARENESS WEEK CELEBRATED-

Vigilance Awareness week was celebrated from 26-31st October 2015 at the institute. On the occasion Director administered the oath to the officers and staff.

During Vigilance Awareness Week, Institute also organized Slogan, Debate and Essay competitions. Following were the winners:

Essay Competition:

1. Shri Santosh K. Tripathi, UDC- Ist
2. Shri Prabhat K. Agrahari, Trainee- IInd
3. Shri Amar Gupta, (SE) IInd year- IIIrd

Debate Competition:

1. Shri Shriram Tiwari, LDC- Ist
2. Shri A.K. Pandey, Draftsman – IInd
3. Shri Santosh K Tripathi, UDC – IIIrd



SAMVIDHAN DIWAS-

The Institute celebrated Samvidhan Divas (Constitution Day) on 26 November, 2015. Senior Administrative Officer and Education In-charge highlighted the contribution of Shri B.R. Ambedkar in drafting of Indian Constitution.



PLACEMENT CELL-

During the period campus interviews were conducted by various sugar factories and other organizations to recruit the students of various courses. During the period M/s Halasidhanath S.S.K Ltd., Belagavi, Karnataka, M/s TriveniEngg.& Industries Ltd., Noida, UP, M/s Allen Smith Ltd., Pune, Maharashtra and M/s Baghaulti Sugar Ltd., Hardoi, U.P, M/s Kesar Enterprises Ltd. Baheri U.P, M/s Daurala Sugar Works, M/s DSCL, Ajbapur, UP, M/s Dhampur Sugar Mills Ltd., Dhampur, UP, M/s Uttam Sugar Mills Ltd., Uttarakhand, M/s Catalyst Chemicals Ltd., Noida, UP and M/s Biodeg Chemical System, UP recruited the students of various courses.



हिंदी कार्यशाला-

सरकारी कामकाज में हिंदी का अधिक से अधिक प्रयोग कर राजभाषा के निर्देशों का शत-प्रतिशत पालन सुनिश्चित करने के उद्देश्य से दि. 22.12.15को संस्थान के सेमीनार हाल में प्रातः 11.30 बजे हिंदी कार्यशाला का आयोजन कर्मचारियों ने भाग लिया। संस्थान के निदेशक श्री नरेन्द्र मोहन नेकार्यशाला का उद्घाटन किया। उन्होंने संस्थान के अधिकारियों एवं कर्मचारियों को हिंदी के अधिकाधिक प्रयोग करने हेतु आह्वान किया जिससे कि संस्थान में हिंदी में कार्य करने का वांछित लक्ष्य प्राप्त किया जा सके।

MISCELLANEOUS –

1. The second Surveillance Audit of ISO 9001:2008 was held on 15th December 2015 by M/s QSI(India) Certification Services, Jaipur.



2. Under the auspices of Central Government Employees Welfare Coordination Committee the Institute organized Weight Lifting and Wrestling competition on 3rd November-2015 at the institute gymnasium.



3. वृक्षारोपण: संस्थान एवं जुहारीदेवी गर्ल्स पी0जी0 कालेज के संयुक्त तत्वाधान में संस्थान के परिसर में एक वृहद वृक्षारोपण कार्यक्रम का आयोजन दिनांक 6 अक्टूबर, 2015 को किया गया।

