



**April-  
June  
2024**

# N E W S L E T T E R

*In July, ethanol blending in petrol reached 15.8 percent, and cumulative ethanol blending during November 2023 to July 2024 touched 13.3 percent. As per E20-target by 2025 will be needing 1016 crore liters of ethanol and considering 334 crore liters for other uses, total requirement shall be about 1350 crore liters in 2025 and at 80 % plant capacity the installed capacity requirement shall be about 1700 crore liters. In view of the positive response of all the stake holders and the present growth of the sector, it is expected that by 2025, we will have installed operating capacity to the expectancy level with 50% of the capacity using sugarcane molasses/juice and the rest 50% other feedstock like rice, maize, rotten/damaged food grains. Keeping in mind the CAGR growth of petrol consumption in India, when one thinks beyond 2025, we will be requiring 60-75 crore liters increase per annum and by 2030, our requirement shall be about 1700 crore liters to maintain E20 in vehicles. Ethanol blended under the EBP program in July 2024 was 64.7 crore liters, and 479.1 crore liters from November 2023 to July 2024.*

*As per the MoU signed between National Sugar Institute (NSI), Kanpur & Indian Institute of Technology (IIT), Kanpur to establish “Centre of Excellence for Bio-fuels”. Under this MoU, NSI Kanpur & IIT Kanpur will soon start projects to enhance the effectiveness and sustainability of bio-fuel production in India through advanced research and development and adoption of cutting edge technologies. To ensure capacity utilization of distilleries, NSI is working on alternate feed stalks like Sweet Sorghum, sugar beet & Cassava.*

*The Institute has planned many activities in coming months such as Executive Development Programme-2024 and BIS Conference related to the standards of sugar and ethanol where we seek active participation of all stake holders.*

**Dr. Seema Paroha**  
Director

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## ❖ NATIONAL SEMINAR

1. National seminar on "Sustainability of Ethanol Production in Current Scenario" organized by National Sugar Institute, Kanpur (NSI) on 12<sup>th</sup> April 2024. The event was jointly organized by NSI and The Sugar Technologists' Association of India (STAI) New Delhi. Delegates from sugar factories, distilleries & other allied industries located in different states participated in the programme.



2. National Sugar Institute, Kanpur organized a national seminar on "Planning and Optimization of Resources for Bio-energy" jointly with The Asian Association of Sugar Cane Technologists' Association, Lucknow (AASCT)

and M/s Spray Engineering Devices Limited (SEDL), Chandigarh at National Sugar Institute, Kanpur on 30<sup>th</sup> April 2024. Delegates from sugar factories, distilleries & other allied industries were participated in the programme.



3. Dr. Seema Paroha, Director, NSI Kanpur inaugurated two days National Conference on "Green Technology & Sustainable Development" organized by NIT, Patna and addressed on "Green Technology & Sustainable Development - Way Ahead in Sugar and Alcohol Industry"





4. Shri Anoop Kumar Kanaujia, Assistant Professor (Sugar Engineering) addressed INDIA BIOFUEL MEET 2024 on "Biofuels from Cane Sugar Industry: Current Perspectives and Opportunities" on dated 8th June 2024.



5. Dr. Seema Paroha, Director, National Sugar Institute, Kanpur attended 64TH ISO Council Meeting India 2024, Workshop: Sugar & Bio-Energy-Emerging Vistas Bharat Mandapam, New Delhi on dated 25th June 2024.



## ❖ TRAININGS

One day exposure visit cum training programme for sugarcane farmers from Bihar Agriculture Management and Extension Training Institute (BAMETI), Patna graced by Director, NSI at the Institute on 3rd May, 2024.



### ❖ **ENTRANCE EXAMINATION-2024**

Entrance Examination-2024 of National Sugar Institute, Kanpur for various courses were conducted on 23rd June 2024. Entrance exam conducted at various centres all across the country through on-line mode.



### ❖ **ACADEMIC COUNCIL MEETING**

Academic council meeting also held on dated 20th June 2024, in the meeting it was decided that PG diploma course in Instrumentation & process Control (DIPC) course may be closed from next academic session 2025-26 and its eligibility qualification may be merged in the ANSI Sugar Engineering course from the next session.

In the meeting it was also suggested & agreed by the council that the class mark of the students of

various courses may be divided in to 60:40 ratio of curricular activities (Test, assignments, seminars etc.) & Co-curricular activities (tree plantation and campus cleanliness).



### ❖ **RESEARCH ACTIVITIES:**

#### **1. Investigation of Biochemical Characteristics of the Sugar beet on storage**

Four varieties of Sugar beet namely – LKC – HB, IISR Comp.1, LS-6 and LKC 2020 were harvested from NSI farm. One set of sugar beet varieties was kept at room temperature and another set was kept at cold storage house. Biochemical characteristics of Sugar Beet stored at room temperature and cold storage room was studied following one month storage

#### **2. Experimental Studies on Selected Sweet Sorghum varieties for Bio-ethanol Production**

The representatives of Advanta Seeds Pvt Ltd., has visited NSI farm for proper planning of seed sowing etc., The NSI farm is getting ready

for sowing seeds provided by Advanta Seeds Pvt. Ltd.

**3. Comparative study on polarization by using lead, non-lead, clarificants and NIR polarimetry.**

Fresh Carrage reagent prepared in Sugar technology Lab for further analysis and Literature survey on effect of non-lead clarificants on Raw sugar/Sulphitation sugar and Refined sugar polarization under progress.

**4. New Product Development- Low GI (Glycemic Index) Herbal Sugar.**

Literature Survey and Research Gap Under Progress.

**5. Comparative study of MOP and distillery K or maximization of Mung bean yield and Soil sustainability”**

Weeding and irrigation in Mung bean (Virat) is done during the month.

**6. Comparative study of MOP and distillery K for maximization of Urd yield and Soil sustainability**

Weeding and irrigation in Urd (IPU 13-1) is done during the month.

**❖ RESEARCH PAPERS/ PRESENTATIONS:**

1. A paper titled “Centrifugation of Cane Juice, Syrup & Molasses for Superior Quality of Sugar” by Amresh Pratap Singh & Mahendra Kumar Yadav has been published in “SHARKARA – January to March 2024” of National Sugar Institute, Kanpur.
2. A research paper titled “Natural Crystal Sugar: A Superior Alternative to Refined Sugar or Plantation White Sugar in the Indian Retail Market” by D Swain. S.K. Trivedi and Vivek Pratap Singh has been published in the Proceedings of All India One Day Seminar on “Planning and Optimization of Resources for Bio-Energy” organized by National Sugar Institute, Kanpur on 30th April 2024.
3. A research paper titled “Energy Efficiency in Indian Sugar Industry : A Sustainable Future” by D swain and Anoop Kumar Kanaujia has been published in the Proceedings of All India One Day Seminar on “Planning and Optimization of Resources for Bio-Energy” organized by National Sugar Institute, Kanpur on 30th April 2024.
4. A presentation on “Various Evaporation Technologies for Energy Saving” by A. K. Garg, M.K. Yadav & M.P. Singh was presented in All India One Day Seminar on “Planning and Optimization of Resources for Bio-Energy” organized by National Sugar



Institute, Kanpur on 30th April 2024.

5. Paper entitled “Use of Artificial Intelligence in Sugar Factory: A NEW TOOL.” By A. P. Singh, S. Chandra, Mihir Mandal & Dr. Seema Paroha submitted for publication in upcoming 82nd STAI annual convention and international sugar expo 2024.
6. Paper entitles “An introduction of marketing mix components to encourage consumer adoption of specialty sugar in retail market.” By V. P. Singh and S. K. Trivedi is submitted for the publication in SISSTA convention 2024.
7. A paper on title “Biofuels a clean and green source of bioenergy – To Mitigate Greenhouse Gasses” by Sanjay Chauhan is submitted for the publication in SISSTA convention 2024.
8. Article on “Energy Efficiency in Indian Sugar Industry: A Sustainable Future” published in proceeding of one day national seminar on “Planning and Optimization of Resources for Bio-Energy”. Jointly organized by The

AASCT Lucknow, SEDL Chandigarh and NSI, Kanpur.

9. Paper entitled “Efficacy of Using Variable Frequency Drives for Sugarcane Preparation Machine” by Vinay Kumar, S. Kumar, A.K. Kanaujia & Dr. Seema Paroha is sent for publication in upcoming 82nd STAI annual convention and international sugar expo 2024.

#### ❖ **MoU SIGNED:**

1. National Sugar Institute, Kanpur signed Memorandum of Understanding (MoU) with M/s. Advanta Seeds, Hyderabad on 25<sup>th</sup> April 2024, for “Collaborative Study on the Use of Sweet Sorghum and Grain Sorghum as Alternatives for Bio-Ethanol Production”.





2. NSI Kanpur and IIT Kanpur signed an MOU to Establish Centre of Excellence for Biofuels, Pioneering Cutting-Edge Technology in Sustainable Energy Research on 15<sup>th</sup> June 2024.



## ❖ CONSULTANCY SERVICES:

Requests for availing consultancy services of the institute were received and also provided to various sugar factories ethanol& other allied units on various technical matters relating to diversion of B-Heavy molasses/syrup, validation of ETPs, preparation of DPRs, validation of no increase in pollution loads in ethanol units upon enhancement in capacity etc.

Sr. No.	Factory Name
1	M/s Rai Bahadur Narain Singh Mills Ltd., (RBNS) Laksar, U.K.
2	M/s Balrampur Chini Mills Ltd., Unit – Maizapur, Gonda, U.P.
3	M/s HPCL bio-Fuels Ltd., Unit – Lauria, West Champaran, Bihar
4	M/s Kisan Sahkari Chini Mills Ltd., Semikhera, Bareilly, U.P.
5	M/s Deewan Sugars Ltd., Agwanpur, Moradabad, U.P.
6	M/s Triveni Engineering & Industries Ltd., Unit – Khatauli, Mujaffarnagar, U.P.
7	M/s Naglamal Sugar Complex (Distillery Unit), Meerut, U.P.
8	M/s National Industrial Corporation Ltd., Bilari (Distillery), U.P.
9	M/s Dhampur Bio Organic Ltd. Asmoli (Division Biofuels & Spirits) Sambhal U.P.

10	M/s Superior Food Grains Pvt. Ltd., Shamli, U.P.
11	CPCB, Ministry of Forest Environment & Climate Change, New Delhi
12	M/s The Ganga Kisan Sahkari Chini Mills Ltd. Morna, Mujaffarnagar, U.P.
13	M/s Dalmia Bharat Sugar & Industries Ltd. Unit- Jawaharpur, U.P.
14	M/s Malbros International Pvt. Ltd. Tilhar, Shahjahanpur , U.P.
15	M/s Crystal Balaji Industries Pvt. Ltd., Mujaffarnagar, U.P.

In addition to the above consultancy services following distilleries were also visited for third party inspection allotted by CPCB

Sr. No.	Factory Name
1	M/s Wave Distillery & Breweries Ltd. (Breweries Unit), Vill.- Ahmadpura, Ramghat Road, Tehsil-Atrauli,
2	M/s Wave Distilleries & Breweries Ltd., Distt. – Aligarh, U.P.
3	M/s Wave Distilleries & Breweries Ltd Grain Unit, Dist. Aligarh, U.P.
4	M/s Superior Industries Ltd. (Distillery) C.B. Gang, Bareilly, U.P.
5.	M/s Kesar Enterprises Ltd. (Distillery Unit), Baheri, Bareilly, U.P.
6	M/s Dwarikesh Sugar Industries Ltd. (Distillery Unit) Fareedpur, Bareilly, U.P.

7	M/s SNJ Bio Products Pvt Ltd., District Bareilly, U.P.
8	M/s Superior Industries Limited (Bottling Unit), Bareilly, U.P.
9	M/s Kishan Sahkari Sugar Mills (Distillery Unit) Sathiyaon, Azamgarh, U.P.
10	M/s Kisan Sahkari Chini Mills Ltd., (Distillery Unit), Ghosi, District-Mau, U.P.
11	M/s Wallop Brewing Company, Village Gulrahwa, Lohra, Sonbhadra, U.P.
12	M/s Balrampur Chini Mills Limited Unit Maizapur Distillery Division, Gonda, U.P.
13	M/s DCM Shri Ram Ltd.,( Distillery Unit), Ajbapur, Lakhimpur Kheri, U.P.
14	M/s Balrampur Chini Mil Ltd, Distillery Unit, Gulariya, Lakhimpur Kheri, U.P.
15	M/s Zuari Industries Limited ( Distillery Division) District- Kheri, U.P.
16	M/s Shradhanika India Corporation, Village Shivrukh Kalan, Tehsil Mahmudabad, District Sitapur, U.P.
17	M/s Radico Khaitan Ltd Bareilly Road,Rampur, U.P.
18	M/s Triveni Engineering & Ind. Ltd.(Distillery Unit Unit), Milak Narayanpur, Rampur, U.P.
19	M/s D.S.M. Sugar Distillery Division, Asmauli, Sambhal, U.P.
20	M/s National Industrial Corporation Ltd. Raja Ka Sahaspur, Bilari, Moradabad. U.P.
21	M/s Shri Gang Industries And Allied Products Limited, Sandila, District Hardoi, U.P.



22	M/s Rana Sugar Ltd. (Distillery Unit), Belwara, Manpur, Moradabad, U.P.
23	M/s Karimganj Biofuels Private Limited, Village Rani Nagal & Sardar Nagar, Moradabad, U.P.
24	M/s Forever Distillery Private Limited Distillery Division, Tehsil Rudrapur, District Deoria U.P.
25	M/s Keyaan Distilleries Private Limited, P.S.- Sahjanwah, District- Gorakhpur, U.P.
26	M/s Bharat Oorja Distilleries Private Limited, Motipur Sugar Mill, Dist-Muzaffarpur, U.P.
27	M/s Muzaffarpur Bio Fuels Pvt. Ltd., Motipur Sugar Mill, P.O-Chauhatta, P.S-Baruraj, Dist-Muzaffarpur, Bihar. U.P.
28	M/s Bharat Plus Ethanol Private Limited, Plot No.-10.
29	M/s Chandrika Power Private Limited, Fatehli Village, Bihar Sharif Block, Nalanda, Bihar.
30	M/s Patel Agri Industries Pvt. Ltd. (Unit I), Dist- Nalanda, Bihar
31	M/s Patel Agri Industries Pvt. Ltd. (Unit II), Dist- Nalanda, Bihar
32	M/s MJ and Sons Distillery and Breweries Pvt. Ltd., Raghunathpur, Amarpur, Banka

#### ❖ ANALYTICAL SERVICES:

Besides analysis of sugar & sugar house products, ethanol and effluents etc., Institute offers testing of Ethyl Alcohol based Sanitizer in its sophisticated, most modern NABL accredited analytical laboratory and other laboratories of the institute.

Testing of bagasse for determination of GCV and lime for various constituents also taken up during the period. Analytical services were rendered to following:

Sr. No.	Factory Name
1	M/s HPCL bio-Fuels Ltd., Unit – Sugauli, West Champaran, Bihar
2	M/s Avadh Sugar & Energy Ltd., Unit – Seohara, Bijnor. U.P.
3	M/s Kisan Sahkari Chini Mill Ltd., Kaimganj, Farrukhabad, U.P
4	M/s Sravasti Kisan Sahkari Chini Mills Ltd., Nanpara, U.P.
5	M/s Dalmia Bharat Sugar & Ind. Ltd., Unit – Jawaharpur, Sitapur, U.P.
6	M/s Balrampur Chini Mills Ltd., Unit – Tulsipur, Balrampur, U.P.
7	M/s Shri Kamla Sugar Industries Unit – Umarkala, Lakhimpur Kheri, U.P.
8	M/s Zuari Industries Ltd. Unit – Gobind Sugar Mill, Lakhimpur, U.P.
9	M/s Sarjoo Sahkari Chini Mills Ltd., Belrayan-Kheri, U.P.
10	M/s Dalmia Bharat Sugar & Industries Ltd., Jawaharpur, Sitapur, U.P.
11	M/s Zuari Industries Ltd. Unit – Gobind Sugar Mill, Lakhimpur, U.P.
12	M/s HPCL Bio-fuels Ltd., Unit-Lauria, West Champaran, Bihar

13	<i>M/s P.B.S Foods (Sugar) Private Ltd., Chandpur, Bijnor, U.P.</i>
14	<i>M/s Kisan Sahkari Chini Mills Ltd., Mahmoudabad Sitapur, U.P.</i>
15	<i>M/s Zuari Industries Ltd. Unit – Gobind Sugar Mill, Lakhimpur, U.P.</i>
16	<i>M/s P.B.S Foods (Sugar) Private Ltd., Chandpur, Bijnor, U.P.</i>
17	<i>District Excise Officer, Sitapur, U.P.</i>
18	<i>District Excise Officer, Khiri, U.P.</i>

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#### ❖ OTHER HAPPENINGS/ DEVELOPMENTS:

1. लोकसभा सामान्य निर्वाचन हेतु 2024 "स्वीप" योजना के अंतर्गत राष्ट्रीय शर्करा संस्थान, कानपुर में संस्थान के विविध पाठ्यक्रमों में अध्ययनरत छात्रछात्राओं-, कार्यरत कर्मचारियों एवं अधिकारियों को दिनांक -22.04.2024 को संस्थान के निदेशक, प्रोस्वाइन ने मताधिकार के प्रयोग करने .डी. की शपथ दिलाई। चुनाव का पर्व, देश का गर्व गर्व के बारे में अवगत कराया।



1. Students from B.N.D. College, Kanpur visited National Sugar Institute, Kanpur on dated 23rd April 2024. Students got exposure about the working of ESF, grain & molasses based distilleries.



2. Prof. Dr. Seema Paroha taken over the charge of Director, National Sugar Institute, Kanpur on 1<sup>st</sup> May 2024 after the superannuation of Prof. D. Swain.



3. As Chief Guest, Director, NSI, graced the National Technology Day-2024 celebration organized by the Defence Materials and Stores R& D Establishment (DMSRDE) at Kanpur and delivered a lecture on the topic "Technological advancement in the sugar and allied industry 17th May, 2024.



4. दिनांक 24/05/16 को नगर राजभाषा कार्यान्वयन समिति कार्यालय (3- की छः माही बैठक का आयोजन आईआईटी कानपुर के आउटरीज ऑडिटोरियम में किया गया। बैठक में नगर स्थित केंद्र

सरकार के कार्यालयों के विभाग अध्यक्षों सहित राजभाषा कर्मियों ने भाग लिया। इस दौरान दिनांक 23/12/19 को आयोजित विभिन्न प्रतियोगिताओं का पुरस्कार वितरण भी किया गया। राष्ट्रीय शर्करा संस्थान की निदेशक प्रोफेसर डॉ. सीमा परोहा द्वारा पुरस्कार वितरित किए गए।



5. Workshop for creating awareness on "Sexual Harassment of Women at Workplace" was conducted at National Sugar Institute, Kanpur 17<sup>th</sup> May, 2024.





6. Representative of M/s Advanta Seeds, Hyderabad visited NSI farm to discuss the work plan for successful collaborative study on the use of sweet sorghum and grain sorghum as alternatives for bioethanol production on 15<sup>th</sup> May, 2024.

7. Online training for e-HRMS was conducted for the staff of the Institute.

8. Technical staff attended the online meeting with Carbon Master Training Institute regarding CNG & CBG production.

9. World Environment Day was celebrated at the institute led by Director, National Sugar Institute, Kanpur on dated 05<sup>th</sup> June 2024, during the celebration tree plantation was also done by the faculty of the institute. On the



occasion “Green Energy Compost Production Unit” was also inaugurated at the Institute.

10. Dr. Seema Paroha, Director NSI Kanpur was invited to AISTA’s 5<sup>th</sup> Sugar & Bioenergy Conclave, as distinguished guest, held in Mumbai. She also delivered a talk on Sustainability in the Sugar Sector in the conclave.



11. Student of Bio & Food Technology discipline from Integral University, Lucknow visited National Sugar Institute, Kanpur on dated 07<sup>th</sup> June 2024, to see the research activities at various division as well as working of ESF, grain & molasses based distilleries.



12. 20<sup>th</sup> meeting of FAD-02 was held on 07<sup>th</sup> June 2024 at the head quarter of Bureau of Indian standards, New Delhi to finalize the standards specifications and methods for various analytical parameters for various sugar and sugar products as well as various equipment's of sugar and allied industries. The meeting was chaired by the Director National Sugar Institute Kanpur along with eminent experts and delegates.



13. Joint Secretary, Department of Food & Public Distribution, Ministry of Consumer Affairs, New Delhi Visited the institute on 15<sup>th</sup> June, 2024 to see the ongoing activities,

research work and other facilities of the institute.



14. National Sugar Institute, Kanpur celebrated 10<sup>th</sup> International Yoga Day on 21<sup>st</sup> June 2024, yoga sessions are organized for enthusiastic participation of the staff aiming to promote Yoga as a means to enhance physical fitness, relieve stress, and improve mental health.



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