Newspaper Clips
January 6-12, 2018

January 12

JNU Is Reinventing Itself and the IITs Should, Too

https://thewire.in/213000/jnu-reinventing-iits/

Whatever the reasoning behind JNU's decision to diversify into engineering and management, it seems about time.

JNU's School of Physical Sciences building. Source: jnu.ac.in

Jawaharlal Nehru University (JNU), India's premiere institution for postgraduate studies in the humanities and social sciences, is seeking to diversify and introduce new programmes in engineering and management. University officials have already submitted a proposal for the same to the University Grants Commission (UGC), the country's premier higher education regulator, and made a presentation of their case.

Since this initiative has come under the leadership of vice-chancellor M. Jagadesh Kumar, an electrical engineer from IIT Delhi, the foray into engineering may not seem very surprising. Incidentally, his home institution also runs management programmes.

JNU's attempt to diversify into engineering and management is likely to be widely criticised by the dominant left-leaning JNU students and faculty since the initiative has come from a vice-chancellor appointed by the current government. However, criticisms of this initiative will also be based on the reasoning that the introduction of engineering and management is a deliberate, masterful ploy aimed at diluting the left-heavy student and faculty bodies on the university campus. With the coming of students and faculty in engineering and management, who are definitely not known for their affinities to left-wing ideas, it is quite certain that JNU as we know it will cease to exist. The expansion, if it happens, will definitely transform the culture and ethos of JNU, which may or may not be a bad thing.

Whatever the reasoning behind JNU's decision to diversify into engineering and management, it seems about time that the institution reinvented itself. Some good things will be lost in the process, of course, but overall, the university will gain more.

Though founded primarily as an entity focused on the humanities (esp. foreign languages) and social sciences (esp. international affairs), JNU today already includes environmental science, life sciences, physical science and biotechnology, among others. Adding engineering and management will further diversify the student and faculty profile of the institution and add to its strength.

The expansion into engineering and management will also help make JNU a better institution in terms of world university rankings since they favour universities with good science, engineering and medicine departments. JNU is already accredited with an A++ grade, the highest possible, by the National Assessment and Accreditation Council (NAAC). It is also placed among the top 10

institutions in national rankings. With the addition of engineering and management, it will likely overtake some of the IITs that currently rank higher.

The reinvention of JNU should be followed by the reinvention of other eminent institutions in the country as well. The IITs in particular must look beyond engineering and try to become more comprehensive institutions. Some IITs, notably the ones at Kharagpur, Delhi, Guwahati (among the older ones) and Gandhinagar (among the newer ones), have already made limited forays into other areas and disciplines. Such diversification must become more widespread across all IITs.

As with JNU, the issue is not one of diversification for the sake of it. There are good reasons to favour the diversification of IITs and even IIMs.

First, higher education institutions, much like state or societal institutions, must evolve with time. The IITs were created at a particular time in history and those times have changed. Their failure to evolve has also meant that they no longer resemble the institutions after which they were modelled, such as the Massachusetts Institute of Technology (MIT), most of which run undergraduate and graduate programmes across the natural sciences, technology, humanities and the social sciences.

Second, the IITs (and IIMs) underutilise their resources, especially and including land (this is true for JNU as well). By introducing other areas of study, whether law, business/management, arts and social sciences, and thereby admitting more students, the IITs would make better use of the hundreds of acres each campus occupies.

Another compelling reason for JNU, the IITs and the IIMs to diversify is that these institutions are islands of excellence in a higher education sector that is otherwise quite 'broken'. By adding more programmes and admitting more students, they will be doing a service to India's young people, who are desperate for good quality college and university education.

Finally, by diversifying in terms of their programmes of study, premier institutions such as JNU (as well as other central universities), the IITs and the IIMs will only become better institutions – not just in terms of university rankings but also through the strength of diversity in student and faculty numbers.

January 11

आईआईटी छात्रों की तकनीक से कचरे को कम करेगा निगम

https://www.livehindustan.com/jharkhand/dhanbad/story-iit-students-will-reduce-waste-by-using-technology-1742607.html

नगर निगम आईआईटी छात्रों की तकनीक की मदद से शहर के बड़े होटल और अपार्टमेंट से निकलने वाले गीले कचरे को खाद में बदलेगा। आईआईटी छात्रों की संस्था टोवोशे ने नगर निगम को आठ कंपोस्टर मशीन दी, जिसमें गीले कचरे से खाद तैयार किया जाएगा। स्वच्छता सर्वेक्षण को लेकर नगर निगम को मिले होमवर्क में एक यह भी काम शामिल है, जिसमें सभी बड़े होटल और अपार्टमेंट से निकलने वाले गीले कचरे को परिसर के अंदर ही डिस्पोजल करना है। इसके लिए नगर निगम को 48 अंक निर्धारित हैं। इस दिशा में काम करते हुए नगर निगम ने मिनी कंपोस्टर मशीनें खरीदी हैं।

टोवोशे के टीम लीडर सौरव कुमार ने बताया कि मशीन की क्षमता 20 किलो है। तीन हफ्ते तक कचरे को उसमें डालकर मशीन चलाई जाती है। इसके बाद वह खाद बन जाता है। जूट के थैले में उसे रखकर इसका प्रयोग खेत या बागवानी में किया जा सकता है। उन्होंने कहा कि अगर नगर निगम उनके साथ करार करता है, तो वह कचरे से बनने वाला खाद लेने को तैयार है। वे उसे मार्केट में बेचने की योजना बना रहे हैं। धनबाद नगर निगम जिन छात्रों से तकनीक ले रहा है। डेढ़ साल पहले उन्हीं छात्रों को निगम ने बाहर का रास्ता दिखाया है। इन्हीं छात्रों ने पिछली बार स्वच्छता रैंकिंग में चास को राज्यभर में अव्वल बनाने में अपनी भूमिका निभाई थी। चास में प्लास्टिक सड़क बनायी गई थी।

January 10

IIT establishes its first food testing lab

https://news.biharprabha.com/2018/01/iit-establishes-its-first-food-testing-lab/

Kharagpur (WB), Jan 10 (ANI): IIT Kharagpur has started testing and certifying food items at its campus. Agricultural and food engineering department's Analytical Food Testing Laboratory received the National Accreditation Board for Calibration and Testing Laboratories (NABL) accreditation, which empowered IIT Kharagpur to certify food items for their nutritional value and also check for adulteration. After getting the accreditation, the IIT has already started the process of certification for some Kolkata-based company for fish items and neem oil. This is for the first time any lab in any of the IITs or NITs in the country has been given this accreditation.

Indore: Cancer patients in India soon to get proton beam therapy treatment: Chidambaram

http://www.freepressjournal.in/indore/indore-cancer-patients-in-india-soon-to-get-proton-beam-therapy-treatment-chidambaram/1201816

Indore: Advocating more use of advanced technology in medical field, principal scientific advisor to Government of India, Dr R Chidambaram here on Tuesday said that soon treatment of cancer patients

through proton beam therapy will commence in the country. "One facility is coming up at Tata Memorial Hospital and another at Apollo Hospital (Chennai). We will also start work on developing the indigenous version of proton beam therapy shortly," the senior scientist told reporters on the sidelines of the 8th Indian Particle Accelerator Conference (InPAC-2018) which was inaugurated at Raja Ramanna Centre for Advanced Technology (RRCAT) on Tuesday.

Addressing the conference, he advocated for development of proton therapy and called upon national labs to work in this direction. Proton therapy is a type of radiation treatment that uses protons to treat cancer. A proton is a positively charged particle. At high energy, protons can destroy cancer cells. The therapy painlessly delivers radiation through the skin from a machine outside the body. Meanwhile, RRCAT director Dr PA Naik during the inaugural function shed light on importance of the biennial conference which is the biggest platform in India to share new ideas and to review progress on the development of accelerator technology.

In PAC-2018 chairman SC Joshi said that around 430 delegates are participating in the conference representing all the major accelerator laboratories of the country, along with a few experts from accelerator laboratories abroad.

RRCAT facility at DABH Mandi to be operational soon

Chidambaram visited the building of Radiation Processing Facility, which is coming up at Devi Ahilya Bai Holkar (DABH) Fruits and Vegetables Mandi, also known as Choithram Mandi. "This will be the first electronic beam facility in the country," said RRCAT scientist Jishnu Dwivedi. He stated that the facility will be fully functional in a year. Currently various trials are going on at the unit. "Industrial product sterilisation, medical items sterilisation, and agriculture products radiation will be done at the facility," Dwivedi said.

"Quality of school education very high in Indore"

Describing Indore as a big centre of education, Dr R Chidambaram said that quality of school education in the state's commercial capital is very high. "Quality of school education is very high in Indore. It's not today, but for past many years Indore is maintaining quality of education," the noted scientist told reporters. He expected that the city will make its mark in higher education as elite institutions like IIM Indore, IIT Indore and RRCAT were here in the city. He also stated that there was a plan to set up Rural Technology Action Group (RuTAG) in IIT Indore. "Currently, only old IITs have RuTAG but there is a plan to set up the centres in new IITs as well," he said. Chidambaram also hailed RRCAT residential colony for emerging as the cleanest locality in the city.

BARC setting up treatment plant at Kabitkhedi

Bhabha Atomic Research Centre (BARC) is setting up a radiation unit at Kabitkhedi sewerage treatment plant for converting dry sledge into fertilizers. The BARC in association with Indore Municipal Corporation is setting up the unit at Kabitkhedi, said scientist at RRCAT Purushottam Shrivastava. He stated that high ionisation of waste would be done at the BARC facility for turning it into fertilizers.

Overuse of fertilisers: IIT Kharagpur creates soil database

http://www.india.com/news/agencies/overuse-of-fertilisers-iit-kharagpur-creates-soil-database-2835345/

Kolkata, Jan 9 (PTI) An IIT Kharagpur research team has created a database of some 1,700 soil samples collected from across Odisha, West Bengal, Karnataka and Rajasthan to have sufficient variations and different properties.

"We created new algorithms (computer programmes) to relate soil reflectance and individual soil properties.

Through our research, we showed that multiple soil properties including those which do not directly influence soil reflectance may also be estimated in this approach – all in a few minutes," Prof. Bhabani Sankar Das of Agricultural and Food Engineering at IIT Kharagpur said.

Reflectance is the measure of the proportion of light or other radiation striking a surface which is reflected off it.

The research has led to the creation of an Indian soil spectral library and Indian computer programmes for estimating soil properties, he said.

While over-use of fertiliser remains a burning issue since the green revolution, recommendations for using the right amount and type of fertiliser can only be made on testing soil samples at a large scale.

Das said since India has over 137 million landholdings, testing of soil samples from such large number of landholding through conventional approaches is a daunting task.

Researchers at IIT Kharagpur have developed unique rapid soil testing methods using the reflectance spectroscopy approach.

The spectroscopy-based soil testing method is fast and may serve as an alternative to traditional soil testing methods, he said.

The technology does not require any chemical agents either. It will enable a lab to analyse a sample for a dozen of properties in less than few minutes, he explained.

This also means a soil testing lab can handle more than 30,000 samples a year as compared to just 3,000-5,000 which is being done currently, thus bringing down the overall cost.

"This has a huge implication for the Indian farmers who can now avail the benefits of this technology and get their soil samples tested at a much-accelerated pace. Through this technology development, we have offered the farmers of this country, preparedness for soil spectroscopy for rapid soil sensing," Prof Das added.

IIT JAM 2018 Admit Card Hall Ticket Released Download @ jam.iitb.ac.in

http://allindiaroundup.com/admit-cards/iit-jam-2018-admit-card-hall-ticket-released-download-jam-iitb-ac-in/

The Indian Institute Technology Bombay is scheduled to conduct Joint Admission Test for M.Sc. (JAM) for admission to Integrated Ph.D. Degree Programs at IISc and M.Sc. (Two Years), Joint M.Sc.-Ph.D., M.Sc.-Ph.D. Dual Degree, M.Sc.-M.Tech., M.Sc.-M.S.(Research)/ Ph.D. Dual Degree and other Post-Bachelor Degree Programs at various IITs on 11th Feb 2018. A huge number of candidates applied for the entrance examination. All the candidates who had appeared for the exam are searching for the admit cards as it is the important document to carry for the exam and contains details regarding exam venue, roll number etc. IIT Bombay released JAM Admit Card 2018. Candidates can download admit card from the direct link provided below.

IIT JAM Admit Card 2018:

The Joint Admission Test for M.Sc. (JAM) is an admission test to Masters of Science (M.Sc.) and other post-graduate science programs at the Indian Institutes of Technology, Indian Institute of Science, and other institutes. IITs started conducting the JAM in the 2004 – 2005 academic session. The main objective of JAM is to provide admissions to various M.Sc., M.Sc.-Ph.D. dual degree and other postgraduate programs based on the performance in a single test. In due course, JAM is also expected to become a benchmark for normalizing undergraduate-level science education in the country. This year it has released the notification and the candidates who had applied can download admit card from the official website.

JAM 2018 Admit Card:

The Indian Institute Technology Bombay released notification and invited online applications for the JAM 2018. A huge number of eligible and interested candidates applied for the exam. Candidates who had applied can download admit card from the direct link provided below. Without admit card candidate is not allowed to write the exam.

JAM 2018 will be held in two sessions. Session I from 9 am to 12 noon and Session II from 2 pm to 5 pm. The Biotechnology (BT), Chemistry (CY), Geology (GG), and Mathematical Statistics (MS) papers will be held in 1st session and Biological Sciences (BL), Mathematics (MA) and Physics (PH) papers will be held in the 2nd session.

Name of the Organization: Indian Institute Technology Madras
Name of the Exam: Joint Admission Test (JAM)
Date of the Exam: 11th Feb 2018
Category: Admit card
Release of Admit Card: Released
Steps to Download IIT JAM Admit Card 2018:

- Visit the official website or the direct link provided below
- The homepage will be displayed.
- Click on JAM 2018 Admit Card.
- Enter your registration number and other required details in the provided fields.
- Click on submit button.
- The admit card will appear on the screen.
- Download/ Take a printout for further reference.

>>Download IIT JAM Admit Card 2018 Here<<

Stay tuned to this website. We will update IIT JAM 2018 answer key, results here. Press CTRL+D to bookmark this page for easy navigation.

NPTEL to offer 226 courses in January 2018

https://indiaeducationdiary.in/nptel-offer-226-courses-january-2018/

NPTEL partnering with CII to provide the technical content and tutorials for training purposes

Chennai: The National Programme on Technology Enhanced Learning (NPTEL) is offering 226 courses in January 2018. This is higher than the 159 courses offered in the last semester. Enrolments (http://nptel.ac.in/) close on 22nd January 2018 for 90 courses and on 5th February 2018 for the rest.

Courses on current technology such as such as Data mining, Machine Learning, Business Analytics with Cloud Computing and Internet of Things (IoT) are being offered for a second consecutive term due to their popular demand. Other courses are on topics such as Business English, Spoken English and soft skills. Other institutes of repute such as IISER-Mohali, IIIT Bangalore are joining the NPTEL family to offer courses which broadens the scope of courses offered.

Speaking about the NPTEL courses, Prof. Andrew Thangaraj, NPTEL coordinator at IIT Madras, said, “NPTEL has opened the doors of high-quality college-level education to everyone through its online course and certification program conducted by faculty from premier Indian institutes and universities. For students, credit transfer is increasingly becoming possible for NPTEL courses with support from MHRD, UGC and AICTE. ”

NPTEL is also officially partnering with the Confederation of Indian Industry (CII) to provide technical content and tutorials for training purposes (www.ciiedugateway.org). Through this partnership, they would explore how the training can be extended to meet industry requirements and come up with joint programmes to fill the gaps in education. The objective is to make fresh college graduates employable and job-ready. NPTEL works with more than 1,300 colleges across India. CII will help close the loop between academia, industry and colleges by connecting them through this initiative.

NPTEL has also started getting requests from outside India and Local Chapters have been established in Afghanistan and Ethiopia.

Industry Initiatives

Further, NPTEL is also launching an ‘NPTEL Industry Associate Programme’ where companies can partner with NPTEL to get their employees trained and reskilled using these courses, with zero financial implication.

Companies can use these courses for training fresh hires, for reskilling of existing employees too. There are no financials involved for becoming an Industry Associate. NPTEL also has a huge pool of human

resources trained in various skills and engineering disciplines, by completing the NPTEL online courses successfully and the companies can also fill their recruitment needs by accessing this talent pool. This would allow the industry to get course-related information from NPTEL, get access to enrolment/examination registration details as well as the performance of the employees belong to the company.

The Highlights of last semester include: more than 10.27 lakh enrolments and 70,000 registrations. An engineer from Turkey flew to India to attend the certification examinations on Acoustics and Noise control.

NPTEL was initiated by seven Indian Institutes of Technology (Bombay, Delhi, Kanpur, Kharagpur, Madras, Guwahati and Roorkee) along with the Indian Institute of Science, Bangalore in 2003. The online courses cover all disciplines of Engineering such as Biotechnology, Ocean Engineering and, Metallurgical Sciences apart from the popular courses such as Computer Science Engineering or Electrical Engineering.

NPTEL is the largest provider of MOOCs in India today, especially the Engineering stream, with a credible proctored certification exam that clearly qualifies and differentiates the learners who do these courses.

January 9

Reform set to sweep all 3 education regulators

https://www.nyoooz.com/news/pune/1004615/reform-set-to-sweep-all-3-education-regulators/

Summary: *We are going to reform the entire regulatory mechanism of UGC, AICTE, NCTE. "Institutes that have the highest NAAC scores will automatically be given autonomy and they won't have to come to the ministry or regulatory bodies," he added. "Regulatory bodies should not create difficulties. We are going to bring this reform in all regulatory bodies soon," he added.He said relevant research that supports uplift of the poor is needed. "Education is subsidised and people contribute to education.*

PUNE: All three education regulatory bodies will undergo sweeping reforms, HRD minister Prakash Javadekar said at the convocation address in Gokhale Institute of Politics and Economics on Monday.The three organizations are All India Council of Technical Education (AICTE), which is the national-level regulating body covering technical institutes, University Grants Commission (UGC), which regulates university education in the country, and National Council of Teacher Education (NCTE), which regulates teachers' education and quality of teachers."Regulatory bodies should not create difficulties. We are going to reform the entire regulatory mechanism of UGC, AICTE, NCTE. They will be seamless, transparent, and efficient, map quality, have the same rules and will not consume time, *As Reported by TOI*.

According to the Newspaper, We are going to bring this reform in all regulatory bodies soon," he added.He said relevant research that supports uplift of the poor is needed. "Education is subsidised and people contribute to education. We should do research that serves the poor.

112 campus offers at IIT-Kharagpur biz school

https://timesofindia.indiatimes.com/city/kolkata/112-campus-offers-at-iit-kharagpur-biz-school/articleshow/62423071.cms

KOLKATA: The final year batch of 111 students of the Vinod Gupta School of Management— the business management school of IIT-Kharagpur — has received a total 112 offers. Of this, 23 are pre-placement offers.

A total of 41 companies have visited the campus so far. These include Accenture Digital, Amazon, Crisil, Deloitte, HSBC, IBM, JP Morgan Chase, Maybank, Nomura, PwC, Quest Global, Spencer's Retail, Titan, Vedanta and Wipro. The companies that visited the campus for first time include 24, Azure Power, Capillary Technologies, Federal Bank, General Mills, HDFC Life, Novartis and Value-Labs. Students have also bagged international offers from companies like Computaris.

While the highest international offer made this year is a CTC of Rs 27 lakh per annum, the highest domestic offer was a CTC Rs 20 lakh per annum.

"A major chunk of the recruitment was recorded in the consulting domain, which was followed closely by roles in analytics, general management and operations. With several reputed companies lined up to visit in the days ahead, the placement figures and statistics are expected to improve further," said Prabina Rajib, dean, Vinod Gupta School of Management.

Three IIT-B students clear the test with flying colours

http://www.dnaindia.com/education/report-three-iit-b-students-clear-the-test-with-flying-colours-2573981

Mayank Raj, Utkarsh Gupta and Suryansh Bhargava Mayank Raj, Utkarsh Gupta and Suryansh Bhargava

Keeping with the tradition of engineering students dominating CAT, three students from Indian Institute of Technology-Bombay have cracked the exam with high scores.

Mayank Raj, a 20-year-old final year student of civil engineering, scored 100 percentile and is among the 20 students from across the country to have achieved the feat. Raj said he gave up on a lucrative offer from ICICI Bank to pursue his MBA dream.

Raj, who hails from Hajipur in Bihar, said he was confident of scoring 99 percentile. "I am happy that I could get a perfect score. Both my parents are very happy about the news." He wants to take up public policy and improve his managerial skills through the management course.

Utkarsh Gupta, son of IPS officer Amitabh Gupta, scored 99.97 percentile. A final year mechanical engineering student, Utkarsh attributed his success to the Powai campus. "Being in IIT-B, quantitative aptitude was a cakewalk for me. I also had no trouble with verbal ability as my schools taught English very well. I would like to go to IIM-Ahmedabad."

At 99.85 percentile, the timing of the results couldn't have been better for Suryansh Bhargava, who turns 22 on Tuesday. "It's the best birthday present from me to me," beamed the B Tech (metallurgy) student, who took coaching from Mumbai's TIME institute.

UGC Ban on distance engineering degrees: Engineers of DRDO, IT, Aeronautical streams move SC for relief

http://www.timesnownews.com/education/article/ugc-ban-on-distance-engineering-degrees-engineers-of-drdo-it-aeronautical-streams-move-sc-for-relief/186855

New Delhi: A group of engineers, including those from DRDO's chemical warfare unit, who are facing the threat of suspension of their degrees, today moved the Supreme Court for relief, saying most of them have been working for over 10-15 years and their career will be jeopardized. The engineering degrees of these candidates, many of whom are employed in aeronautical and IT streams also, were obtained after pursuing distance learning course from four institutions in academic session 2001-2005.

However, according to a November 3 order of the apex court, the degrees of students, who studied in these four deemed universities--JRN Rajasthan Vidyapeeth, Institute of Advanced Studies in Education (IASE), Rajasthan, Allahabad Agricultural Institute (AAI) and Vinayaka Mission's Research Foundation, Tamil Nadu, will remain suspended from January 15 this year.

A bench of Justices Adarsh Goel and U U Lalit today said that it will pass orders on multiple petitions separately on January 12. Senior advocate V Giri appearing for some of the engineers said that there were candidates who appeared in competitive examinations based on degrees obtained from these universities and qualified it to get a job. They are now at senior positions in their respective organisations.

"These candidates risk losing their jobs after being 10-15 years in service. The court should have a humane approach towards them as it will have a cascading effect on them and their families will be in trouble," he said. Giri said that there were also some candidates who were in service and used their degrees to get the promotion. The top court said that the degrees were wrongly given by the universities and it had the interest of students in its mind while granting them two opportunities to clear the examination to be conducted by AICTE.

"Post facto approvals were granted to these universities by the authorities concerned despite there being a provision for prior sanction for enrolling the students. There was ambiguity between them but we didn't want the students to suffer and hence granted them opportunities," the bench said. After their degrees were held to be "illegal and void", it was not the students' right that they are given such an opportunity, it said.

"There has to be some test of their abilities as many of the study centres affiliated to these universities did not even have the necessary infrastructure. Those who will not pass the examination will have to face the consequences," the bench observed. Senior advocate Meenakshi Arora, appearing for one of the students who studied from ITM University (now Northcap University) at Gurgaon, said that his client didn't even know that his degree was in the distance learning category.

Arora said that there is another category of students who didn't know it was a distance learning course as they attended regular classes. "World-class companies tested their skills, they qualified for the post, did their post-graduation all on the basis of that degree," she said. "It is not the case where their skills were not tested. They had all necessary infrastructure at their colleges and students attended all the classes just the degree was from another university," she contended.

Additional Solicitor General Maninder Singh supported the cause of the students and said that some other methodology could also be there for testing the abilities of students. He said that if on the basis of this foundation degree, a candidate acquires another superior degree than his case can be considered by the court. Similarly, other candidates who are now mining engineers, many with the Central Armed Police Forces like ITBP and Seema Suraksha Bal have also approached the court seeking relief.

The bench said it will consider the petitions and pass the orders on January 12. On November 3, the top court had set aside the ex-facto approvals granted by the UGC to the four deemed universities, terming them as "incorrect" and "illegal", saying that such institutions were not justified in introducing any new course in technical education without the approval of AICTE.

The top court had directed the AICTE to hold tests for the students whose degrees would stand suspended by January 15, 2018 and said these students should not be given more than two chances to clear the examination. If the students do not successfully clear the examination within the stipulated time, their degrees will stand cancelled and every single advantage on the basis of that degree shall also stand withdrawn, it said.

The court had said that any promotion or advancement in career on the basis of such degree shall also stand withdrawn. It had also cancelled the engineering degrees awarded to students who were

admitted after the academic session 2001-05 in these four deemed universities in distance education mode.

January 8

IIT-Kharagpur study flags fertiliser overuse in Bengal agriculture

https://timesofindia.indiatimes.com/city/kolkata/iit-kgp-study-flags-fertiliser-overuse-in-bengal-agriculture/articleshow/62407767.cms

KOLKATA: If you thought "eating local" was one of the healthiest food trends, maybe it's time for a reality check. An IIT Kharagpur study has found a more-than-50% overuse of fertilisers in Bengal, which could be exposing the population to a host of serious ailments, even cancer, apart from taking a heavy toll on the environment.

"In Bengal, phosphorus, potassium and nitrogen are added to the soil by farmers in very high proportions. Without soil testing, it has a hazardous health impact," said lead scientist Bhabani Das of IIT-Kgp's faculty of agriculture and food engineering department.

The team — comprising faculty and researchers — was working on how to make soil-testing fast and inexpensive, so that farmers test the soil of their holdings before deciding on how much and what fertiliser to use. In doing so, they toured Bengal extensively and collected soil samples from agricultural fields in several districts: South Dinajpur, Malda, Murshidabad, Burdwan, Hooghly, Howrah, East and West Midnapore, Nadia, and the two 24-Parganas. After extensive study, the team concluded that the level of minerals and other nutrients is quite high in these districts, and farmers can easily cut down on fertiliser use by as much as 50%.

The fertiliser overuse is not only rubbing off on the crops. A number of chemicals and heavy metals also leaching into waterbodies, and eventually into the groundwater, say experts. Doctors have warned of fertiliser overuse taking a heavy toll on human health. "Intake of excessive potassium can cause cardiac problems and trigger muscle paralysis," said Arindam Biswas, a medicine consultant at Rabindranath Tagore International Institute of Cardiac Sciences.

"Excessive nitrogen, on the other hand, is linked to a condition called methemoglobinemia, a condition in which abnormal haemoglobin is produced, impairing oxygen transfer to tissues. It can also cause neural tube defect (defective brain and spinal cord formation) and hyperthyroidism. Phosphorus can also degenerate the bone," he added. Other health professionals pointed out that heavy metals such as mercury, lead and cadmium, often found in fertilisers, can affect kidneys, lungs, the liver and can even cause cancer (see graphic).

The team has stressed that farmers need to properly test their soil before deciding to use fertilisers.

Soil testing is not popular because there are very few laboratories, the tests are time-consuming and

expensive. The team has come up with a technology, where the testing will be done with the help of spectroscopy, and the results will be derived from the energy absorbed/reflected back. Apart from determining the health of the soil, the test method will also determine the grain size of the soil, the soil moisture level and the weathering index (how the soil was formed). This is the first time any soil-testing technology in the world has been able to derive these results, said a euphoric Das. The research has been published in the prestigious 'Soil Science Society of America' and 'Geoderma', two of the world's most respected journals on agricultural science and technology.

Agricultural scientist Sibasish Chatterjee said fertilisers should be used in a proper ratio. "Ideally, nitrogen, potassium and phosphorus should be used in a ratio of 4:2:1. This ensures a balanced overall crop growth. However, there is a tendency to over-use urea-based fertilizers, which are highly subsidized. Nitrogen-intensive fertilizers give crops luxuriant growth but overuse can be detrimental in the longer run. We should not deviate from the proper balance," he said.

IIT pact with naval academy

https://www.telegraphindia.com/states/north-east/iit-pact-with-naval-academy-199419

The MoU-signing ceremony in Guwahati

Guwahati: IIT Guwahati has joined hands with the Indian Naval Academy in Kerala for student exchange and research collaboration after faculty exchange programmes with the army and air force.

A memorandum of understanding was signed between the IIT and the academy on January 4 here for exchange of students and faculty for five years. "According to the MoU, cadet officers of the navy undergoing BTech courses will undergo a semester course at IIT and internships while our students will be sent there. Though the naval academy has a similar exchange programme with a few other IITs, they are eager to know about the rich culture and ethnic diversity of the Northeast, apart from technical education," Wanshai Shynret, assistant registrar of alumni and external relations, IIT Guwahati, said.

"They approached us for an MoU and we agreed as our students will learn from the students and faculty of the naval academy. This will also give them access to high-end machinery and equipment and learn practical challenges faced by the navy. Our students will also benefit by learning about the rich culture, heritage and glorious history of the navy," he said.

The naval academy had earlier signed similar MoUs with IIT Madras and IIT Gandhinagar.

"The collaboration with the Indian Navy will open up a new horizon for the Northeast. The research projects will help grow expertise in specialised areas," IIT Guwahati director Gautam Biswas told The Telegraph.

Shynret said the exchange programme will begin from July. "We will work out the details of the exchange programme and research projects before our next session begins," he said.

IIT Guwahati has a faculty exchange arrangements with some army and air force colleges.

January 7

IIT Delhi approached to recover lost rare speeches of leaders like Mahatma Gandhi, Sardar Vallabhbhai Patel

http://www.newindianexpress.com/nation/2018/jan/07/iit-delhi-approached-to-recover-lost-rare-speeches-of-leaders-like-mahatma-gandhi-sardar-vallabhbha-1747116.html

NEW DELHI: Public broadcaster Prasar Bharati has approached the Indian Institute of Technology, Delhi to help in recovering some of its rare audio and video archives through digitization—including speeches of prominent freedom fighters—after several agencies failed to accomplish the task saying “it was beyond them”.

Senior authorities at IIT, Delhi said that the pubcaster, that runs All India Radio and Doordarshan, had reached out to one of the top engineering schools to “rescue” some of its archives after several agencies assigned the task over last few years had said that digitizing some tapes was a “major engineering challenge.”

“We have been told to take up the unfinished task of digitization that was started some years ago. There are several tapes of leaders like Mahatma Gandhi, Sardar Vallabhbhai Patel and Maulana Abul Kalam Azad and few other programmes on analogue records or playback machines that cannot be read or played,” a senior official at IIT, Delhi told this newspaper.

“This is probably because those tapes have not been maintained properly or have been overwritten,” the official also said.

” “We will now decide whether we want to take up the project but we understand how important to recover and preserve the invaluable speeches by some of the greatest leaders in the country,” he added.

Sources said that Prasar Bharati had begun the process of digitization in 2014 but the process has been very slow. While DD-archives has nearly 150,000 hours of analogue content on BCN/U-matic tapes and about 200,000 hours on Beta tapes.

AIR, on the other hand, has about 12,000-15,000 hours of the programme in analogue form on tapes/LP-discs and nearly 20,000 hours of programme stored on CDs in its Central Archives at Delhi. In addition, about 75,000 hours of the programme in analogue form is available at major AIR stations.

Much of the archive footage is of immense historical and cultural importance as DD and AIR were only radio and Television medium in the country for a long time.

The broadcaster has been hoping to emulate a model followed by the UK broadcaster BBC which made over 400 million Euros in recent years after it started selling the digitized versions of its archive content worldwide.

Jawhar Sircar, former chief executive of Prasar Bharati during whose tenure the digitisation was first started said though the digitisation is an established process, the help of IIT Delhi would have been sought by Prasar Bharati to “recover damaged or missing sounds.”

IIT-KGP course to rediscover technique used in making ancient

http://www.business-standard.com/article/pti-stories/iit-kgp-course-to-rediscover-technique-used-in-making-ancient-118010700153_1.html

The IIT Kharagpur has embarked on a course to rediscover the technique used in building ancient Indian landmarks such as the Dilwara Jain temple or the Kailasa temple of Ellora caves.

Such ancient structures are marvels of architecture built from top to base cutting a single gigantic stone, IIT Kharagpur Director Prof Partha Pratim Chakrabarti told PTI.

"We are amazed to think about the tools used in construction of structures such as the Dilwara temple or the Kailasa temple," Chakrabarti said.

These structures were built from top, while modern day architecture talks about elevation from the ground, he said.

"We have to find out the design and implementation technology of these structures. We have to study the symbols dating back to that era," he said.

Construction of the Kailasa temple of Ellora caves in Maharashtra was attributed to 756-773 CE, while the Dilwara Temple in Rajasthan was completed between the 11th and 13th centuries CE.

The IIT-KGP director said the course was part of the SandHI (Scientific Approach to Networking and Designing of Heritage Interfaces) spearheaded by the institute to revisit India's ancient heritage and history.

SandHI is a science-culture initiative to re-visit India's ancient past through the lens of scientific inquiry and already underway in Varanasi.

Classes under the course have started in the IIT-KGP campus, Chakrabarti said.

ICAR backs use of cow urine in organic farming

http://www.newindianexpress.com/thesundaystandard/2018/jan/07/icar-backs-use-of-cow-urine-in-organic-farming-1746498.html

NEW DELHI: Indian Council of Agricultural Research (ICAR), the autonomous body responsible for co-ordinating agricultural education and research in the country, has put a stamp over the use of cow urine in organic farming.

Under its Network Project on Organic Farming, ICAR observed that cow urine can supplement the nutrient value of the soil and help in the management of insects, pests and diseases under the organic production systems. ICAR evaluated cow urine in different cropping systems.

Assistant Director General, ICAR, Dr S Bhaskar said, “Spraying of cow urine has been found to be beneficial as it fulfills the nutrient requirement during the process of organic farming, but more study is needed into this. The spray must be a mixture of 10 per cent cow urine and 90 per cent water. Keeping the same in view, National Dairy Research Institute is conducting further study.”

ICAR officials said that the use of fermented cow urine enhances soil fertility and it can also be turned into liquid fertiliser as a pesticide for crops. Liquid manure from cow urine is easy to make and is good for plants in comparison to artificial fertiliser.

There are many ministers in the current cabinet who have recommended the use of cow urine to cure health issues. Senior BJP leader and Union minister Nitin Gadkari had revealed that he uses cow urine and that it can cure diabetes.

Incidentally, the Indian Institute of Technology (IIT), Delhi, has received 50 proposals from different academic and research institutes to study the benefits of cow urine and milk under the Scientific Validation and Research On ‘Panchgavya’ (concoction of cow dung, cow urine, milk, curd and ghee) programme.

According to officials, the government is promoting organic farming in the country through a cluster approach via dedicated schemes namely Paramparagat Krishi Vikas Yojana (PKVY) and Mission Organic Value Chain Development for North Eastern Region under the National Mission for Sustainable Agriculture.

The decision to ask ICAR to conduct a study on use of cow urine in organic farming was taken after a high-level meeting at the NITI Aayog in October last year. Union Minister Giriraj Singh was also called for a study on use of cow urine, dung and bio-waste in organic farming. Sources claimed that Prime Minister Narendra Modi had asked NITI Aayog officials to consult the minister on popularising organic farming.

Sikkim is the only state that has officially been declared an organic state. It is India's first fully organic state where cow dung and urine are used for farming and killing pests.

Promoting Productivity
Liquid manure from cow urine is easy to make and is good for plants in comparison to artificial fertiliser.
IIT-Delhi has received 50 proposals from different academic and research institutes to study the benefits of cow urine and milk.

Sikkim is India's first fully organic state where cow dung and urine are used for farming and killing pests.

Chennai hosts meet for IIT students

https://timesofindia.indiatimes.com/city/chennai/chennai-hosts-meet-for-iit-students/articleshow/62399122.cms

CHENNAI: Indian Institute of Technology, Madras is hosting the 6th edition of the annual Inter-IIT Tech meet on January 6 and January 7. Students of 19 Indian Institutes of Technology (IITs) are taking part in this meet. The meet provides an opportunity for the IIT students to compete as well as collaborate.

This year, with 'Impact Generation' being one of the main goals of the meet, IIT Madras has collaborated with various industries and government organizations. These include Bhabha Atomic Research Centre (BARC), Defence Research and Development Organization (DRDO), Honeywell International Inc, Tata Consultancy Services and Cochin Shipyard Ltd.

The objective was to come up with solutions to problem statements that were given to them by these organizations. The problem statements range from technology for supporting the Armed Forces, where participating teams are expected to create cutting-edge devices to aid soldiers on the field; to safety device for fishing vessels which forewarns small ships when large vessels are in the vicinity and an automated toilet-cleaning robot. These problem statements are based on real-life situations in the industry and the solutions presented in the meet will be incorporated by the partners.

January 6

IIT researchers mix metal with pain killer drugs to treat cancer

https://www.biospectrumindia.com/news/58/10152/iit-researchers-mix-metal-with-pain-killer-drugs-to-treat-cancer.html

The drugs used in the study work against cancer cells in different ways, thus creating a more effective and holistic way of treating the disease.

A group of researchers from the Indian Institute of Technology (IIT) Indore, Ropar and Guwahati have combined ruthenium, a metal which is part of the platinum group, with commonly used pain killers, categorized as non-steroidal anti-inflammatory drugs, to develop four new drug complexes.

Anti-cancer activities of four new combination drugs with ruthenium — complex 1 (with naproxen), complex 2 (with diclofenac), complex 3 (with ibuprofen) and complex 4 (with aspirin) — were tested against lung, breast and cervix cancer cell lines in laboratory.

Complex 3 is more effective in preventing the enzyme causing pain and swelling, followed by complex 2 and complex 1. Complexes 2 and 3 have shown remarkable effects in stopping the growth of cancer cells in lung, breast and cervical cancer.

The drugs used in the study work against cancer cells in different ways, thus creating a more effective and holistic way of treating the disease.

Though the rationale and research methodology of this study is sound and academically interesting, it may still be regarded as indicative rather than conclusive. It is still preliminary to be adjudged as mainstay treatment.