

supported by AICTE under a flagship project of CSIR-NISTADS & AICTE aimed at empowering 90 technical institutes and colleges of North East in the areas of Energy, Water and Communication. The main objective of the workshop was to provide a platform for close interaction between the technical institutes, CSIR-NISTADS and AICTE for development of project proposals and their future implementation. The workshop was inaugurated on 2 November, 2017 which was presided over by Dr D Ramaiah, Director, CSIR-NEIST and graced by Dr P K Mishra, President (NEKF) & Vice Chancellor, Kaziranga University as the Chief Guest. The technical sessions held during 3-4 November 2017 saw intensive discussions and hands-on exercise on project(s) formulation followed by their evaluation under the technical supervision of experts from AICTE led by Prof Dileep N Malkhede, Adviser (RIFD), CSIR-NISTADS team led by Dr Vipin Kumar, Head-Project Monitoring & Evaluation and Prof Rupam Kakoti, Head-Energy Sciences, Tezpur University. A short press meet was also held on 4 November 2017 chaired by Dr P Goswami, Director, NISTADS. The concluding session was held on 4 November 2017 presided over by Dr P Goswami, Director, CSIR-NISTADS. Altogether 27 faculty members from 23 technical institutes & colleges of Assam, Arunachal Pradesh, Meghalaya, Mizoram, Nagaland and Sikkim participated in the workshop.

Stakeholders' Training Workshop-cum-Field Consultation Meeting held at CSIR-NEIST Branch Lab, Imphal

A 3-day program on Stakeholders' training workshop-cum-field consultation meeting under National Mission for Himalayan Studies (NMHS) was held at CSIR-NEIST Branch Laboratory, Imphal, during 1-3 December 2017 under the project "Anthropogenic impact & their management options in the Indian Himalayan region, Imphal river", funded by GBPNIHESD, Ministry of Environment, Forest & Climate Change, Govt. of India. Dr R K Ranjan, Advisor to Hon'ble Chief Minister Manipur; Dr J C Kuniyal, Head, GBPNIHESD, Kullu Unit; Mr Mahendra Pratap Singh, Chief Conservator of Forest, Govt. of Manipur & Dr H B Singh, Scientist-in-Charge of Branch Laboratory of CSIR-NEIST attended as presidium members. Six talks were delivered on watershed, forest resource, Manipur river system and seasonal dynamic of river water in the technical session from Depts like Loktak Development Authority, Forest Dept, Planning Dept. GBPNIHESD, Kullu. The program was attended by 47 officials and villagers from the Imphal river watershed. A field survey was also conducted in the watershed area of Imphal river.



Inauguration of the 3-day meeting by lighting of the lamp by the dignitaries on 1 December 2017

Workshop on Design & Development of Innovative Leather Lifestyle Products held at CSIR-NEIST Branch Lab, Imphal

A one-day workshop on “Design & development of innovative leather lifestyle products in combination with ethnic textile material and natural fibre of northeastern part of India for the self sustainability and socio-economic development of local population and MSME Sector” was held at CSIR-NEIST branch lab, Imphal on 13 December 2017. The program was jointly conducted by CSIR-CLRI, Chennai and CSIR-NEIST branch LAB, imphal under the sponsorship of CSIR, MSME and DST, Govt. of India. Hands-on training on product development was held during the day. A total of 37 women weavers and entrepreneurs attended the program. Dr K Krishnaraj, CSIR-CLRI, Prof N Mohendro Singh, Former member of NE Vision 2020, Dr N Ranjana, Director of Institute of Cooperative Management, Imphal, Shri D Mitra, Deputy Director, MSME Institute, Imphal, Shri Th. Surendranath Singh, Director, Manipur Science & Technology Council and Dr H B Singh, Scientist-in-Charge, branch lab were the presidium members



Inauguration of the one-day workshop on design & development of innovative leather lifestyle products in combination with ethnic textile material and natural fibre of Northeastern part of India

CSIR-NEIST Branch Lab, Imphal organized sensitization workshop on medicinal plants and home herbal garden



Shri L Jayentakumar Singh, Hon'ble Minister, Health & Family Welfare, Govt. of Manipur delivering his speech on the occasion

CSIR-NEIST Branch Laboratory, Imphal organized a one-day sensitization workshop on 'Medicinal plants and home herbal garden' at its premise on 20 January 2018 in collaboration with Directorate of AYUSH, Govt. of Manipur & State AYUSH Society, Manipur. Shri L Jayentakumar Singh, Hon'ble Minister, Health & Family Welfare, Govt. of Manipur; Dr A Guneshwor Sharma, Director, AYUSH, Govt. of Manipur, Dr Y Lukhoi Singh, Member Secretary, AYUSH Society, Manipur & K Devdutta Sharma, Project Officer, MOMA, Govt. of Manipur were some notable personalities present in the program. The programme was attended by 63 farmers & entrepreneurs from Imphal. The programme dealt on the emerging importance of herbal medicine in AYUSH treatment and the various benefits of cultivating & maintaining herbal home garden.

Events Organised

CSIR-NEIST celebrated National Technology Day 2017



Prof. R K Khandal, President, R&D Business Development, India Glycols Ltd. Noida, delivering the National Technology Lecture on 'Role of CSIR in making Chemical Industry Self Sustainable'



Prof. R K Khandal releasing the compendium on CSIR-NEIST technologies in presence of Dr D Ramaiah, Director, CSIR-NEIST

CSIR-NEIST celebrated National Technology Day on 11 May 2017 with a special programme held at Dr J N Baruah Auditorium. Prof R K Khandal, President R&D Business Development, India Glycols Ltd. Noida, graced the occasion as Chief Guest and delivered the National Technology Day Lecture. The programme was presided over by Director, CSIR-NEIST, Dr D Ramaiah. Besides the Director of Central Muga Eri Research & Training Institute, Dr B K Singh, veteran and retired scientists, present and ex-staff members of CSIR-NEIST fraternity, students and research scholars, industry partners, Press & Media attended the function. In tune with the spirit of the day, a *Compendium on CSIR-NEIST Technologies* was also released by the Chief Guest to commemorate the technological feats achieved by the institute. The day was also declared as an 'Open Day' for students and the general and more than 100 students and teachers from different schools visited the institute on this special day.

CSIR Aroma Mission launched at Mizoram

Hon'ble Chief Minister of Mizoram, Shri Lal Thanhawla launched the 'CSIR-Aroma Mission' at Lunglei, Mizoram on 24 August 2017 in presence of CSIR-NEIST team led by Dr P Sengupta, Director-in-charge. Under this flagship programme of CSIR, CSIR-NEIST aims to boost cultivation of economically important aromatic plants like Citronella, Lemongrass and Patchouli in NE region, thus helping the farmers to take up farming of alternative crops with better economic value. The Institute will be working closely with several local NGOs to promote the cultivation of these plants which require less attention and can be done in unproductive waste lands including those affected by water scarcity. It is hoped that the initiative would not only boost the cultivation but also help in value-addition of aromatic plants which will greatly benefit the aroma industries. At a solemn ceremony held at Convention Centre, Lunglei, Hon'ble Chief Minister, Shri Lal Thanhawla addressed an august gathering of farmers, members from the All Mizoram Farmers' Union and other dignitaries besides CSIR-NEIST

team. Dr P Sengupta while speaking on the occasion highlighted the aims and objectives of the Mission programme and said that in the next three years, a minimum of 800 hectares of land in the North Eastern region is likely to be brought under cultivation of various aromatic crops while generating employment among rural youth and creating trained and skilled manpower leading to economic upliftment of the rural people.



Shri Lal Thanhawla, Hon'ble Chief Minister of Mizoram, delivering his address on the occasion



Dr P Sengupta, Director-in-charge, CSIR-NEIST, speaking about CSIR Aroma Mission at the event

CSIR Aroma Mission launched at Manipur



Dr Najma Heptulla, Hon'ble Governor of Manipur, delivering her address on the occasion



Distribution of Citronella and Lemongrass planting materials to farmers by Dr Najma Heptulla, Hon'ble Governor of Manipur

CSIR-NEIST launched the CSIR Aroma Mission project in the state of Manipur on 19 September 2017. Dr Najma Heptulla, Hon'ble Governor of Manipur launched the programme in a solemn ceremony held at CSIR-NEIST branch lab., Imphal in the presence of Dr D Ramaiah, Director, CSIR-NEIST and staff members. In her address during the function, Dr Heptulla stressed the importance of biodiversity conservation and extended her help & support for the mission programme in the state. Dr D Ramaiah, Director, CSIR-NEIST presided over the function. A Memorandum of Understanding (MoU) was signed and exchange between CSIR-NEIST and All Manipur Trained Medicinal & Aromatic Plants Promoters Consortium for implementation of the CSIR Aroma Mission in 500 hectares of land in the state of Manipur and quality planting materials of lemongrass and citronella developed by CSIR-NEIST, Jorhat were distributed to the farmers by the Hon'ble Governor of Manipur. The launching function was also

attended by Dr Pinaki Sengupta, Chief Scientist, CSIR-NEIST as guest of honour and Dr S P Saikia, Principal Investigator, CSIR Aroma Mission. The programme concluded with vote of thanks offered by Dr S P Saikia.

23rd Dr J N Baruah Memorial Lecture held at CSIR-NEIST

The 23rd Dr J N Baruah Memorial Lecture was held at CSIR-NEIST on 1 September 2017 with a special programme at Dr J Baruah auditorium. The programme was jointly organized by Dr J N Baruah Memorial Trust; Assam Science Society (Jorhat branch) and CSIR-NEIST. It is to be mentioned that Dr J N Baruah Memorial Lecture is held annually in the honour and fond memory of Late Dr J N Baruah, Former Director of CSIR-NEIST and also an eminent scientist and educationist from Assam who contributed significantly in science and its popularization among the students. Padmabhushan Dr A V Rama Rao, Founder, Chairman & Managing Director, Avra Laboratories Pvt.Ltd., Hyderabad graced the occasion as Chief Guest and delivered the Memorial Lecture on the topic, "Science and its relevance to the society" while Dr R S C Jayaraj, Director, Rain Forest Research Institute, Jorhat attended as Guest of Honour. The function was presided over by Dr R C Boruah, Former Outstanding Scientist, CSIR-NEIST & President, Assam Science Society (Jorhat branch). Dr D Ramaiah, Director, CSIR-NEIST delivered the welcome address. Dr R L Bezbaruah, Life Member, Assam Science Society presented a gist of the activities and achievements of Late Dr J N Baruah.



Dr D Ramaiah, Director, CSIR-NEIST delivering welcome address on the occasion. Seated on the dais (from right), Dr R S C Jayaraj, Director, Rain Forest Research Institute, Jorhat; Dr R C Boruah, President, Assam Science Society (Jorhat branch), and Dr A V Rama Rao, Founder Chairman & Managing Director, Avra Laboratories Pvt.Ltd., Hyderabad



Dr A V Rama Rao, unveiling the bust of Late Dr J N Baruah in presence of Dr D Ramaiah, Director, CSIR-NEIST and other dignitaries

On the occasion, the bust of Late Dr J N Baruah was unveiled by the Chief Guest, Padmabhushan Dr A V Rama Rao in presence of the Director, CSIR-NEIST, dignitaries from the Assam Science Society (Jorhat branch) and Dr J N Baruah Memorial Trust besides the family members of Late Dr J N Baruah and CSIR-NEIST fraternity. Dr Manash Protim Baruah, son of Late Dr J N Baruah in his short speech extended his personal greetings and gratitude to the distinguished speaker for the exemplary lecture on this

memorable day. As a part of the event, this year the Late Dr J N Baruah Student Scholarship was awarded to Mr Partha J Dutta, a student of class XI (science) of Crescent Academy, Jorhat for having secured 83.8% marks in HSLC in 2017. The programme was attended by an august gathering of CSIR--NEIST fraternity, invited guests, dignitaries, members from the Assam Science Society, Dr J N Baruah Memorial Trust and school students.

CSIR-NEIST celebrated 76th CSIR Foundation Day



Dr D Ramaiah (left), Director, CSIR-NEIST and Dr Mukul R Jain, Senior Vice President, Zydus Research Centre, Cadila Healthcare Limited, Ahmedabad & Chief Guest of the programme seen seated on the dais during the programme



Dr Mukul R Jain delivering the 76th CSIR Foundation Day Lecture

CSIR-NEIST celebrated the 76th Foundation Day of its apex body, Council of Scientific & Industrial Research (CSIR) on 25 September 2017 with a day-long programme at its premise. Having traversed seven and a half decades of its glorious existence, this year's celebration marked the culmination of the year-long Platinum Jubilee celebration of the organization. A special function was held at Dr J N Baruah auditorium in the morning hours wherein Dr Mukul R Jain, Senior Vice President, Zydus Research Centre, Cadila Healthcare Limited, Ahmedabad graced the function as Chief Guest and delivered the Foundation Day Lecture on the topic, "Should Indian Pharma Industries change its generic mindset? Can India discover new drugs? ". Dr D Ramaiah, On the occasion, CSIR-NEIST publication, 'Annual Report 2016-17' was released by the Chief Guest. Later, the employees who retired during September 2016 to August 2017 were felicitated with CSIR Sanman Patras & Mementoes and also those who completed 25 years in Council's service were felicitated with token gifts. Further, certificates



ST/SC students felicitated on the occasion with Dr D Ramaiah, Director, CSIR-NEIST and Dr Mukul R Jain, Chief Guest of the function

and prizes were distributed to the winners of various competitions held under the occasion like Drawing, Essay, Debate and Quiz competitions held among the school students and staff members.

Also, CSIR-NEIST awarded cash prizes to SC/ST students of NE region who secured the highest percentage in class X from various state boards under the 'CSIR scheme of cash award for SC/ST students'. Under this, 3 students who could turn up for the programme, two from Mizoram and one from Meghalaya were felicitated. Further, 'CSIR-NEIST Golden Jubilee Scholarship scheme for bright students of NE region' which started in 2013 with an aim to enthuse North East students towards basic science (in UG level) was continued this year also and the scholarship for 2016-17 was awarded to selected 2 meritorious students from Assam who secured at least 70 percentage and belonging from economically weak background.

CSIR-NEIST celebrated the 71st Independence Day



Dr D Ramaiah, Director, CSIR-NEIST inspecting the Guard of Honour



Dr D Ramaiah delivering his address on the occasion

CSIR-NEIST celebrated the country's 71st Independence Day with great joy and enthusiasm on 15 August 2017 with a flag hoisting ceremony held in front of the Administrative Block. CSIR-NEIST staff members along with their families, students and teachers of NEIST Kendriya Vidyalaya (KV) turned in large numbers to celebrate the day. Dr D Ramaiah, Director, CSIR-NEIST inspected the Guard of Honour and unfurled the National Flag followed by the National Anthem song played to mark the celebration. Dr Ramaiah then took the salute of march past performed by CSIR-NEIST fraternity and students of KV. As a part of the celebration, sweets and replicas of National Flag were later distributed to all present.

Exhibitions Organised/Participated

Exhibition held at the Premises of Parliament



Mr Madhurjya Saikia, Sr Technical Officer, demonstrating the CSIR-NEIST's technologies to the Hon'ble Minister for Railways Shri Suresh prabhu, in the exhibition held at the premises of parliament of India, New Delhi during 28 July -11 August, 2017

Farmer's Day Celebration-2017, at Regional Agricultural Research Station, Titabor



Hon'ble Sri Atul Bora, Agriculture Minister of Assam visited the CSIR-NEIST Exhibition Stall held at Regional Agricultural Research Station, Titabor during 6-7 November, 2017.

Exhibition held at Aizawl



Dr. D Ramaiah, Director, CSIR-NEIST and Dr. Sanjay Kumar, Director, CSIR-IHBT at the exhibition stall of CSIR during the Exhibition held at Aizawl, Mizoram during 13-18 December, 2017.

Arunachal Statehood day Programme, at IG Park Itanagar



CSIR-NEIST Branch Lab Itanagar team at the stall



Exhibition Stall

The statehood day was observed at IG Park Itanagar during the period 20-24 Feb, 2018. NEIST Branch Itanagar participated in statehood day and displayed/showcased the activity of NEIST Jorhat and Branch Itanagar. About 1200 nos. of people visited the stall.

Entrepreneurship Development Programme- Dhemaji Haat – a Rural Livelihood Mela



Visit of MLA, Dhemaji at NEIST Stall



NEIST Jorhat Stall at Dhemaji

CSIR NEIST Participated in Entrepreneurship Development Program "Dhemaji Haat" organized by District Authority, Dhemaji during 8-12 January, 2018. Dhemaji-Haat – a Rural Livelihood Mela at Dhemaji (Assam) in Jan'2018 organized for the benefits farmers and cultivators where training on rural technologies like mushroom cultivation and vermicompost production were imparted to farmers . Also the awareness on technologies of CSIR-NEIST Jorhat was delivered to Mr Ranoj Pegu, Honb'le MLA of Dhemaji, Mr Bhuban Pegu, Honb'le MLA of Jonai, Mrs Roshni Aparanji Korati IAS, the DC of Dhemaji District and other dignitaries of Govt of Assam.

MSME Industrial Exhibition, held at Jorhat

CSIR-NEIST participated in the Industrial Exhibition held at Jorhat Stadium during 23-24 January, 2018. CSIR-NEIST showcased the MSME technologies through posters and sample materials during the exhibition.



Dr. D Ramaiah, Director, CSIR-NEIST interacting with the dignitaries during the exhibition

Road Show of CSIR Technologies: CSIR-NEIST participated in the Road-show of CSIR Technologies held on the occasion of the launch of “Be an Entrepreneur of Science & Technology (BEST)” program at Vizag, Andhra University on 25 January, 2018 organized by CSIR in association with Sujana Foundation and NRDC, New Delhi.

Societal Activities

Banana Fibre Development Centre inaugurated at CSIR-NEIST Branch Lab, Imphal and training provided to the first batch of trainees

With an objective to motivate unemployed youth towards entrepreneurship development in the region and particularly in the state of Manipur through low cost technologies like Banana fibre extraction and processing, CSIR-NEIST has established a Banana Fibre Development Centre at its Branch Lab in Imphal, Manipur. The Centre was inaugurated by Shri Th Biswajit, Hon'ble Minister for Commerce & Industries, Power & PWD, Govt. of Manipur and Shri Karam Shyam, Minister, Revenue, CAF&PD, Govt. of Manipur on 22 May 2017 in presence of Dr D Ramaiah, Director, CSIR-NEIST. Dr H B Singh, Scientist-in-charge, Branch Lab and Dr T Goswami, Principal Scientist working in the area of natural fibres including Banana fibre were also present on the occasion besides other members from the Institute. The inauguration programme was followed by the opening of 5-day training programme on novel products & Banana fibre held during 22-26 May 2017. The training was held in collaboration with CSIR-CLRI, Chennai wherein a total of 57 trainees from Manipur participated in the programme.



Inauguration of Banana fibre development centre at CSIR-NEIST branch laboratory, Manipur



An entrepreneurship development training programme at CSIR-NEIST Branch laboratory, Manipur

CSIR-NEIST organized Student-Scientist interactive programme under JIGYASA

A 3-day programme under CSIR's Student-Scientist connect programme, 'JIGYASA' was organized by the institute at its premise during 28-30 August 2017. A total of 70 students of standard IX from Kendriya Vidyalaya-NEIST, Jorhat and Kendriya Vidyalaya-Air force Station, Jorhat attended the programme along with 4 teachers. The Programme is expected to connect 1151 KVs with 38 National Laboratories of CSIR and will target 100,000 students and nearly 1000 teachers annually. The 3-day programme at CSIR-NEIST commenced with a short inaugural function at Dr J N Baruah Auditorium on 28 August 2017. Mr Partha Paul, Scientist & Coordinator of the programme spoke about the genesis of the programme and the various activities to be covered during the period. Dr D Ramaiah, Director, CSIR-NEIST in his address to the students encouraged them to make the most of it by taking active participation in all the sessions. He further added that the younger generation are the future of our

nation and through this programme, CSIR aims to reach out and nurture these young minds by exposing them to the scientific developments taking place in various Institutes and thus motivating them to be a part of nation's growth. The 3-day programme included notable presentations by various resource persons on topics like Astrophysics, Mathematics, Nano-science, Chemistry, Zoopharmacognosy Biology and alike with practical experiments. Besides technical lectures, a session on career guidance was also held wherein various career opportunities in the field of science & technology were apprised to the students. The programme received enthusiastic participation of the students. The programme concluded with a Valedictory function held on 30 August 2017 wherein certificates were distributed to all the students and the teachers.



Participating students and teachers of JIGYASA program along with Director, CSIR-NEIST and organizing team members



Students from KV No. 1 (Naharlagun), KV No.2 (Itanagar) and KV NERIST (Nirjuli), Arunachal Pradesh under the scheme of "project JIGYASA"

Interaction cum awareness program of CSIR-NEIST's newly developed bio-fertilizer organized

An interaction cum awareness program with entrepreneurs and farmers for popularization of the newly developed bio-fertilizer, OP-12 was organized in association with M/s Amrit Organic, Duliajan on 1 December 2017 at Duliajan. A team of five (5) from CSIR-NEIST attended the program. The team visited the farming area where field application of the Bio-fertilizer on various Rabi crops was carried



The technology team of OP-12 Biofertilizer in the interaction cum awareness program at Duliajan

out by M/s Amrit Organic. Mr Dilip Ch. Talukdar, Proprietor, M/s Amrit Organic, expressed high satisfaction with the performance of the bio-fertilizer. The program was also attended by the Manager, Allahabad Bank, Duliajan Branch. About 100 nos. of farmers attended the program and interacted with the technology team led by Dr Ratul Saikia, Sr Scientist. The team demonstrated the use and various aspects of the OP-12 bio-fertilizer.

CSIR-NEIST organized training program on Cultivation and Processing of Aromatic Plants

CSIR-NEIST in association with the NGO, Juriya Aromatic Small Farmers Unit, Goalpara organized a training program on cultivation & processing of aromatic plants on 19 January 2018 under CSIR Aroma Mission project at Goalpara, Assam. A team from CSIR-NEIST interacted with the trainees on various aspects of the cultivation and processing practices. Altogether 79 farmers participated in the program.



Trainees of the program along with CSIR-NEIST team

CSIR-NEIST organised 'Beneficiary Interaction Meet for the weavers trained under CSIR-Integrated Skill Initiative'

CSIR-NEIST organised a Beneficiary Interaction Meet at its premise on 25 January 2018 with a day-long programme under CSIR-Integrated Skill Initiative Programme. The aim of the programme was to provide a platform for discussion on various aspects related to business & marketing of weaving products produced by the beneficiary weavers trained under CSIR-Integrated Skill Initiative implemented by CSIR-NEIST in the region.



Left: Shri Kamakhya P Tasa, Hon'ble Member of Parliament, Jorhat Constituency speaking on the occasion. Mr Kamkhogin Vaiphei, District Development Manager, NABARD; Mr Seiminthang Haokip, AGM & Branch Head, IDBI Bank, Jorhat and Dr D Ramaiah, Director, CSIR-NEIST are seen seated on the dais (from right). Right: Beneficiaries participating in the interaction meet along with CSIR-NEIST staff members

Shri Kamakhya Prasad Tasa, Hon'ble Member of Parliament, Jorhat Constituency, Mr Seiminthang Haokip, AGM & Branch Head, IDBI Bank, Jorhat and Mr Kamkhogin Vaiphei District Development Manager, NABARD, Jorhat, graced the occasion as Guests of Honour. The programme was attended by large number of CSIR-NEIST staff and weavers trained under CSIR-Integrated Skill Initiatives held at Dr J N Baruah Auditorium. Mr Dipankar Neog, Senior Scientist and Coordinator, Skill Development Programme of CSIR-NEIST, delivered a presentation on the various activities of CSIR-NEIST including the skill development programme. The weaving programme has been running with the help of associated NGO 'SNEHPAD'. Dr D Ramaiah, Director, CSIR-NEIST delivered the welcome address wherein he emphasized on various societal activities of the Institute. Shri Kamakhya Prasad Tasa, Hon'ble MP expressed his appreciation for CSIR-NEIST for its various societal development activities in the region. He also stressed on the importance of new technologies to be used besides using the old customs and tradition for making weaving products. Mr Kamkhogin Vaiphei, District Development Manager, NABARD in his speech described the role of NABARD in development of agriculture sector and in providing access to funds from different banks to the common people. Mr Seiminthang Haokip, AGM & Branch Head, IDBI Bank, Jorhat in his speech mentioned about the various kinds of loans available for the weaker section of people as well as farmers. During the programme, loans to some sanctioned groups and Jacquard Looms were distributed by the Hon'ble MP to Joint Liability Group (JLG) of the beneficiary weavers. Around 100 weavers, Assistant Director: Handloom and Textile, Govt of Assam, professors of different universities, scientists of different research institute and CSIR-NEIST staff participated in the programme.

Training program on MSME scale technologies

Celulose Pulp and Paper (CPP) group organised a training programme on MSME sale technologies i.e. Production of Liquid Deodorant Cleaner, Low Dust Chalk pencil, Banana Fibre extraction and imparted training to 25 rural entrepreneurs on the occasion of Womens day celebration at CSIR-NEIST, Jorhat on 8 March 2018.



MSME scale technologies training programme at CSIR-NEIST

Entrepreneurship development training programme



Handmade paper training programme at CSIR-NEIST

A five days entrepreneurship development training programme on handmade paper making and product development was jointly organized by CSIR-NEIST and Grameen Sahara, a Guwahati base NGO at CSIR-NEIST from 20-24 March, 2018. 10 selected entrepreneurs from different parts of Assam were trained up on manufacturing handmade paper using different bio materials. Two resource persons related to handmade paper making were invited during the programme. The product making from handmade paper was also shown to the participant. The programme was supported NRDC, New Delhi.

Activities under Mushroom Cultivation

CSIR-NEIST and NEIST branch lab, Itanagar extended training and technical guidance on Mushroom Cultivation to a large number of beneficiaries from Arunachal Pradesh and Assam during the period. The beneficiaries were trained on preparation of mushroom culture, preparation of mushroom spawn and its commercial cultivation during the month long training programme at NEIST Branch, Itanagar.

CSIR-NEIST extended training to school dropouts under CSIR 800 programme

CSIR-NEIST imparted training on Mushroom cultivation and Cultivation of aromatic plants and oil distillation techniques to 17 school dropout students of the Institute of Cultural and Rural

Development (I-CARD), Baghchung, Jorhat at its premise during 2-3 August 2017.



Hakum Hapa SH- Group, Polocolony, Naharlagun: A one month skilled training programme on Cultivation of Mushroom offered to “Hakum Hapa SHG” Polocolony, Naharlagun. A total of 10 ST women house wives have taken the training during the period. As a practical demonstration the Group were prepared 60 mushroom bags and the earned an amount of Rs. 12,000/- by harvesting and selling of 70 kg fresh mushroom during the training programme.



Training programme preparation of mushroom bags (left) and preparation of culture and spawn (right) at NEIST Branch Itanagar



The members of “Hakum Hapa SH Group” during harvesting of fresh mushroom

Siang Mushroom Growers SHG, Pasighat: The “Siang Mushroom Growers SHG” has started commercial mushroom cultivation under the technical guidance of CSIR-NEIST Branch Lab, Itanagar. Mrs. Oti Sitang, the president of the group highly emphasized on commercial cultivation of mushroom. Due to insufficient mushroom spawn, she innovated a rural model of Laminar Air Flow under NEIST Branch, Itanagar's technical guidance. During the reporting period Dr Jagat ch. Borah visited her unit and trained up on preparation of mushroom culture and mushroom spawn in her rural model of laminar air flow at Pasighat



During training to Mrs. Oti Sitang (left) and technical guidance on mushroom spawning (right)

Synchro Serve Global Solution: The “Synchro Serve Global Solution” has also been engaged in providing skills training to urban unemployed people in Papumpare district with an aim of providing them a gainful self employment and skilled wage employment opportunity under the banner of state Urban Livelihood Mission's EST&P DAY-NULM. The NGO was very interested on mushroom cultivation for its popularization among the BPL level ST people in the state.



During Training

Other Mushroom training Programs

CSIR- NEIST Branch Lab, Itanagar organized a series of training programme on commercial cultivation of mushroom.



25 educated unemployed ST youth in different localities in Itanagar, Nirjuli and Naharlagun attended the training programme



A day long training programme on cultivation of mushroom at Pachin colony Naharlagun where a total of 25 ST women participated in the training programme

Few Success Stories under Mushroom Cultivation

“Rete-Lida SH-Group” Daporijo: “Rete-Lida SH-Group” is also a progressive mushroom beneficiaries of CSIR-NEIST Branch Lab, Itanagar and has started mushroom cultivation under technical guidance of Scientist and In-Charge Dr Jagat C. Borah, CSIR-NEIST Branch Lab, Itanagar since 2016. As per report received from Mr. Lida the society has earned an amount of Rs.60,000/- by harvesting and selling of 240 kg fresh mushroom during the 2016-17 period.



Sri Tariya Lida Secretary, “Rete-Lida SH –Group” Daporijo (left) and their members with the mushroom cultivation unit at Daporijo (right)

“ASHWASH”- the ray of hope, Lakhimpur, Assam: “ASHWASH”- the ray of hope is another progressive society taken Commercial cultivation of mushroom under our technical guidance at Azad, North Lakhimpur, Assam since 2016. Under the technical guidance of CSIR-NEIST Branch Lab, Itanagar, several unemployed youth has been trained. As per report received from the secretary, Mr. Bhaskar Borah the society has earned an Amount of Rs. 45,000/- by harvesting and selling of 300 kg fresh mushroom in North Lakhimpur local market during 2017-18.



Mr. Bhaskar Borah, Secretary
“ASHWASH” – the ray of hope and his
mushroom cultivation unit.



Other Mushroom cultivation unit of “ASHWASH” Azad,
North Lakhimpur district, Assam.



“Jugal Millan SH- Group” Laluk, Assam: The NGO “Jugal Millan SHG” is actively associated with CSIR-NEIST Branch Itanagar on cultivation of mushroom and vermicompost production since 2016. Under the technical guidance of NEIST Branch, Itanagar the secretary of the NGO Md. Moidul Islam had been taken an extensive works on commercial cultivation of mushroom in his locality in Laluk. As per feedback report received from Mr Md Moidul Islam an amount of Rs.1, 00,000/- (Rupees One lakh) has already earned by producing and selling of 700kg Fresh mushroom during 2017-18.



Md. Moidul Islam (left) secretary of "Jugal Milla SH-Group and his mushroom production unit at Laluk, Assam

Krishi Vigyan Kendra (KVK) Papumpare: Based on the Scientific Advisory committee (SAC) of KVK papumpare at Nirjuli during 2016, the scientific advisory committee suggested the concerned subject matter specialist (SMS) of KVK Papumpare to take up mushroom cultivation in different rural locality in Papumpare district as well as in the state. CSIR-NEIST Branch Lab, Itanagar provided full supported and cooperation with technical guidance to the respective SMS of KVK Papumpare during the reporting period. Presently the KVK Papumpare has done extensive works on popularization of mushroom in different rural localities in different districts of Arunchal Pradesh.



Smt. Tadang Meena SMS (Agronomy) KVK Papumpare (left) and a training programme organized at Nirjuli (right)



During training

KVK West Siang: CSIR-NEIST Branch, Itanagar Has Provided Technical support on mushroom cultivation to KVK West Siang district during the reporting period. Mr. Gonya Dirchi (SMS of West Siang) is an energetic young SMS of KVK West Siang who has taken the extensive work on popularization of mushroom cultivation by organizing several training programme in different rural localities in West Siang district in Arunachal Pradesh. As per report of Mr. Dirchi the members of the training group were earned an amount of Rs.12,000/- by harvesting and selling of 80 kg fresh mushroom (1st harvest) during the month of October to December 2017.



Gornya Dirchi (SMS), West Siang (left) and villagers participated in the training programme organized at Yinkong (right)



Engagement of village people on cultivation of mushroom in rural village in West Siang district of Arunachal Pradesh

Sri Biki Taddy, Chimpur, Itanagar: Sri Biki Taddy is an educated unemployed youth of Itanagar locality. Sri taddy has been engaging on commercial cultivation of mushroom as his only income source since November 2017. CSIR-NEIST Branch Lab, Itanagar provided technical guidance, probable constraints related for the commercial cultivation of mushroom and post harvest management of this crop. Now, Sri Taddy is fully skilled on mushroom cultivation and installed two big commercial mushroom production unit at Chimpur. As per report of Sri Taddy has earned an amount of Rs. 65,000/- by producing and selling of 325 kg fresh mushroom during December 2017 to February 2018.



Sri Biki Taddy and his Cultivation Unit

“Char Chapari SH-Group” Bongalmara, Laluk, Assam: Smt. Miju deori is poor ST women of Bongalmara locality. During the year 2016 Dr Jagat Borah and his team had organized a training programme on commercial cultivation of mushroom at her residence. Since then she has been engaged cultivation of mushroom. As per feedback report received from Smt. Miju Deori she had earned an amount of Rs.35,000/- by harvesting and selling of 290 kg fresh mushroom in Bongalmara local market.



Smt. Miju Deori (left) Secretary of Char Chapari SH-Group and during visit her mushroom cultivation unit at Bongalmara, North Lakhimpur district, Assam

Rajat Pawe, Bongalmara, North Lakhimpur, Assam: Sri Rajat Pawe is an educated poor ST people of Bongalmara locality. His income source is based on different horticulture crop. Along with CSIR-NEIST Branch Lab, Itanagar Scientist Incharge, Dr. Jagat C. Borah visited his farm house at Bongalmara during 2016. Based on our technical guidance he initiated commercial cultivation of mushroom since 2016. As per feedback report received from Sri Rajat Pawe he has earned an amount of Rs.45,000/- by harvesting and selling of 375 kg fresh mushroom in Bongalmara local market.



Mr. Tadar Taddy Doimukh: Mr. Taddy took mushroom cultivation under CSIR-800 programme on March 2016 organised by NEIST Branch, Itanagar. Mr. Taddy continued mushroom cultivation under NEIST Branch's technical guidance. Mr. Taddy is a retired civil servant suffering from acute diabetic problem and take mushroom supplement regularly in his food habit. As per his feedback report Mr Tadar Taddy has harvested about 100 kg more fresh mushroom of an amount of Rs. 20,000/- and used only for consumption. It was his pleasure to inform us that he has stop purchasing of mushroom from the market.



Mr. Nabam Tajik Nirjuli: Mr. Nabam Tajik is also CSIR-NEIST Branch Lab, Itanagar's progressive mushroom beneficiary. After attending training programme at NEIST Branch Itanagar, he started mushroom cultivation continuously since 2016 at Nirjuli. CSIR-NEIST Branch Lab, Itanagar is still associated with Mr Nabam Tajik by providing time to time technical guidance to him. As per his feedback report he has earned an amount of Rs. 12,000/- by harvesting 60 kg of fresh mushroom during October to January 2018.



Smt. Deni Rinya, Pachin Colony, Naharlagun: CSIR-NEIST Branch Lab, Itanagar organised a training programme on cultivation of mushroom at Pachin colony, Naharlagun during February 2018. Based on the technical guidance, Smt Rinya initiated mushroom cultivation in his residence at Pachin Colony Naharlagun. Smt. Rinya has produced about 30 kg fresh mushrooms within two month (for the first time) and has earned an amount Rs. 6,000/- by selling to others.



“Enajori SH-Group” Naharlagun: CSIR-NEIST Branch Lab, Itanagar has provided training on mushroom cultivation to all of the members of this SH-Group and with the help of NEIST Branch, Itanagar, the “Enajori SH-Group” Naharlagun has started mushroom cultivation for the first time. As per their feedback report, 40 kg fresh mushroom harvested during Nov-Dec, 2017 and the group has earned an amount of Rs.8,000/- by selling in Naharlagun local market.



Mushroom Spawn Distribution

CSIR-NEIST Branch Lab, Itanagar is now a major and reliable provider of Mushroom Spawn for Arunachal Pradesh and adjacent areas of Assam.

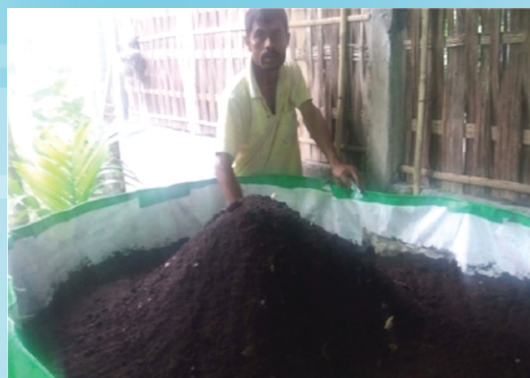




Vermicompost Production

NEIST Branch Lab, Itanagar has organized a series of training during skilled development programme on production of Vermicompost.

“ASHWASH” –the ray of hope, Azad, North Lakhimpur, Assam: “ASHWASH” has established a commercial vermicompost production unit at Azad, North Lakhimpur, Assam. Based on CSIR-NEIST Branch Lab, Itanagar's technical guidance, the NGO currently producing 3.0 qt / month and has earned an amount Rs.72,000/- during 2017-2018.



“Jugal Millan SH-Group” Laluk, North Lakhimpur, Assam: Under the technical guidance of CSIR-NEIST Branch Lab, Itanagar, the NGO started producing 8.0 qt / month vermicompost and has earned an amount Rs.60,000/- during April to July 2017. The society has also been linked with the market for quick selling his produces in Naharlagun/ Itanagar local market



KVK Papumpare, Nirjuli: Under the technical guidance of CSIR-NEIST Branch Lab, Itanagar, the NGO started producing vermicompost.



Supply of Vermiculture

To promote vermicompost production for sustainable socio-economic development CSIR-NEIST Branch Lab, Itanagar provided vermiculture (*I.fotida*) to several NGOs and individuals during the period. Necessary technical guidance, cost economics, feedback monitoring, post harvest management and marketing was also awarded to each and every party during the supply of vermiculture.



Supply of vermiculture to Sri Tadar Tarak, Bepra Bast, Jotte village (Left) and to Mr. Aje Dolo, Itanagar, Papumpare district (right)



Supply of vermiculture to Smt.Monju Siram, (left) Lekhi village, and to Mr. Minam Milang, (right) Naharlagun, Papumpare district



Supply of vermiculture to Smt Deni Rinya, Pachin colony, Naharlagun Papumpare district and to Mr. Toni Ete (Agri. Extension Officer) West Kameng District,.



Supply of vermiculture to Smt Cello Oku, Kankanallah, Naharlagun Papumpare district and to Mr. Tayam Jamoh Pasighat, East Siang district

Sensitization work

The CSIR-NEIST, Jorhat team in collaboration with district administration and SaCIWATERs works on the sensitization of the community on the issues of Arsenic toxicity for separating the myths and reality in Majuli



Discussion in Majuli DCs office – (left) representatives of the community, PHE, doctors, engineers and administration (right) Team of experts with CSIR NEIST scientists in Majuli

Awards

World Championship Award 2018



Dr Swapnali Hazarika, Senior Scientist received **World Championship Award 2018** in Membrane science for the paper entitled “Selective permeation of CO₂ through Amine bearing facilitated transport membranes” authors: Panchali Bharali, Somiron Borthakur, Swapnali Hazarika* from International Agency for Standards and Ratings. The research article is a winner among 5786 nominations from 69 countries, screened for the world academic championship-2018 in membrane science

Best Poster Award

- ♦ Sunita Munda, Sukriti Dutta, Joyashree Baruah, Mohan Lal., received best poster award for the poster, “Antimicrobial activities of essential oil from different aromatic and medicinal plants of Northeast India: A biodiversity hotspot ” presented at 26th National Conference on Natural Resource Management for Climate Smart Sustainable Agriculture held at Barapani, Meghalaya, during 11-13 September, 2017.
- ♦ Joyashree Baruah, Sudin Kumar Pandey, Mohan Lal. (2017) received best poster award for the poster, "Analysis of genetic diversity amongst ginger germplasm (*Zingiber officinale*) from NE-India using RAPD and ISSR markers" presented at 4th International Symposium on Minor Fruits, Medicinal and Aromatic Plants (ISMFM & AP) held at College of horticulture and forestry, Central Agricultural University, Pasighat, Arunachal Pradesh, during 5-6 December, 2017.
- ♦ Debjani Baruah, Rebika Baruah, RNS Yadav & Archana Moni Das, received best poster award for the paper, “ biosynthesis of ZnO/Ag nanoparticles, its antibacterial activity and application in degradation of toxic dyes” in NAMASTA-2017 (Nanomaterials Science, Technology and Applications) organized by department of Physics, Dibrugarh University, Assam India during 10-11 November, 2017.

Membership in Reputed Journals/Association/Forums/Bodies

- Dr Binoy K Saikia, Scientist Edited a special “Recent progress in Clean Coal Research” in International Journal Oil, Gas and Coal Technology (Inderscience Publisher)
- Dr Binoy K Saikia, Scientist has been selected as a Member of, National Advisory Committee, Mineral Processing Technology (MPT), 2018 to be held in IIT (ISM), Dhanbad.
- Dr Binoy K Saikia, Scientist has been awarded as Outstanding Reviewer of Journal of Cleaner Production, Journal of Environmental Chemical Engineering, Journal of Molecular Liquids, Ultrasonics – Sonochemistry, Journal of Molecular Structure, Fuel, Chemosphere, Environmental Pollution
- Dr Jayaramudu J. Pr. Scientist has been awarded as Outstanding Reviewer of Journal of Biomedical Materials Research: *Part A*, Carbohydrate Polymers, Journal of Korean Chemical

Society, International Journal of Biological Macromolecules

- Dr Prasenjit Saikia, Pr. Scientist has been selected as a Executive member of National Environmental Science Academy, New Delhi

Recognition

- **“Coal Quality Control Laboratory”** of **Polymer Petroleum and Coal Chemistry Group**, CSIR-NEIST is recognized as referral coal testing laboratory by Coal India Limited.

Others

- Dr HB Singh, Principal Scientist, BLIM, Imphal was invited as a resource person in a discussion program of the AIR, Imphal on Management of biodiversity which was broadcasted from AIR, Imphal on 6/8/2017.
- Dr HB Singh, Principal Scientist, BLIM, Imphal was invited as a resource person in a discussion program of the AIR, Imphal on Bioresource prospects which was broadcasted from AIR, Imphal on 2/10/2017.

Fellowship

Sl. No	Name of staff	Name of fellowship received	Name of awarding body/org.	Purpose	Duration
1.	Dr Shaswat Barua	CSIR-Nehru fellowship	CSIR, New Delhi	R&D	2 Years

Training Attended

Sl. No	Title of Programme	Organizers details & duration / date	Name, Designation & Department of the staff
1	Two days' workshop for CSIR labs on Bio Fuels	CSIR, New Delhi during 7-8 April 2017	Dr S P Saikia, Senior Scientist
2	Integrative Taxonomy (Theoretical lectures and hand -on-training on various software and wet lab works including Phylogenetic analysis, Molecular Biology, Cytogenetics, Taxonomy and conservation, Biodiversity Informatics, etc.)	Delhi University , during 14-23 November, 2017	Dr Dipanwita Banik, Scientist
3	National conference of CPCSEA for welfare of laboratory animals	Indira Gandhi Paryavaran Bhavan, New Delhi during 1-9 January, 2018	Dr Jyoti Lakhmi Hatibariuah, Technical Officer
4	Induction Training Programme	CSIR-HRDC, Ghaziabad, New Delhi during 15-24 January, 2018	Dr.Jayaramudu Jarugala, Scientist