



EDITOR'S DESK

I am extremely happy to write this column on the occasion of New Year 2023! I am happy to see so many physical activities around the country after 2 years of the CoVID pandemic. Two special mentions are the Improved Smart Vending Cart and the satisfactory live demonstration of IIT Delhi's Sheep Hair Shearing Device in Avikanagar in front of Textile Ministry and CWDB officials, thereby making a possible entry into the commercial market. For the vending cart, Prof. Godara has made all strategic planning to come up with various models. It is now important to penetrate the market by adopting a suitable business plan so that the vendors can have access to the new carts, and thereby enhance their daily income.

Finally, I must admit to express my happiness seeing the enthusiasm of our UG students who in large numbers (300+) taken up the RuTAG summer internship in TOP or Team-based Online Project format.

Jai Hind!

Prof. S. K. Saha

Visit of Prof. Richard Voyles from Purdue University, USA

Prof. Richard Voyles from Purdue University, USA, visited RuTAG IITD (Fig. 1) on Dec. 13, 2022. RuTAG staff gave a presentation on various activities and technologies developed by RuTAG throughout the years. Prof. S. K. Saha and Prof. Voyles had interactive discussions during the visit about RuTAG and EPICS collaborations with Purdue University.



Fig. 1: Prof. R. Voyles visiting RuTAG



Fig. 2: Technology handover to AARDO nations by Dr. Parvinder Maini

TECHNOLOGY FOR AARDO NATIONS

A total of 6 sets of technologies from RuTAG IIT Delhi (Treadle Pump and Ground Water Level Measuring Device) were handed over to the African-Asian Rural Development Organization (AARDO) nations on September 28, 2022. Prof. S. K. Saha and Prof. M. R. Ravi, along with Dr. Parvinder Maini, Secretary PSA office, handed over the technologies (Fig. 2) to the concerned representatives of four AARDO nations, Ghana, Namibia, Zambia, and Sudan.



Fig. 3: MoU Signing at NCUI

(Left to right: Mr. Raj Kumar Gupta, Mr. Sumit, Prof. Saha, Dr. Sudhir Mahajan, Shri Dileep Sanghani)

Memorendum of understanding with NCUI

RuTAG IIT Delhi signed an MoU with the National Cooperative Union of India on Nov. 7, 2022, at NCUI Delhi (Fig. 3) to identify the technology needs of artisans and provide low-cost solutions for business growth. The MoU was signed by Prof. S. K. Saha (PI, RuTAG IITD) and Dr. Sudhir Mahajan (CE, NCUI) in the presence of Shri Dileep Sanghani (President, NCUI). Several steps of collaboration to disseminate RuTAG technologies were discussed.

All india coop week exhibition @ NCUI Haat Delhi

Mr. Ashish and Mr. Davinder Pal Singh from RuTAG IIT Delhi attended the 69th All India Cooperative Week Exhibition (Sahkar Mela) held at the NCUI Haat, New Delhi (Fig. 4), during Nov. 14-20, 2022. Hon. Shri B. L. Verma was the chief guest of the event.



Fig. 4: RuTAG IITD stall at Sahkar Mela



Fig. 5: AKGEC Campus

Memorendum of understanding with AKGEC

RuTAG IIT Delhi signed an MoU with the Skill Center of Ajay Kumar Garg Engineering College, Ghaziabad (Fig. 5), on Nov. 06, 2022. Prof. S. K. Saha and Prof. R. P. Agrawal signed the MoU on behalf of RuTAG IITD and AKGEC, respectively. This collaboration will be fruitful in developing the technologies for the benefit of rural applications.

Latest on Tulsi Mala Beads Making Device

A device for making Tulsi mala beads has been redesigned, developed, and demonstrated to the artisans of Jait village, Mathura. This device (Fig. 6) has the capability to support artisans in producing better-quality beads with higher productivity than the previous version. It has been equipped with a VFD speed controller where the speed can be varied as per the convenience of operator. RuTAG IIT Delhi has developed this device in collaboration with Harraj Industries and artisans from Jait village. The artisans are very optimistic about the performance of the device.

Few devices have been sold to artisans, and more devices are expected to be sold in the future. A team from IIT Delhi is also working on creating a business model for this device, namely, Product centric design, where artisans are provided with the device and raw materials free, and 50% beads will be shared with entrepreneur.



Fig. 6: New Device in use

Demonstration of Sheep Hair Shearing Device at Leh, Ladakh



Fig. 7: Shearing in action with indigenous device at Leh



Fig. 8: Imported steel comb used for pashmina wool extraction



Fig. 9: Sheep and Goat flock at Pyangong Valley

Shepherders from various local places and sheep husbandry division officers came for the demonstration. Mr. Rinchin and Ms. Padma (Himmotthan Society) joined as well. As soon as the shearing started, all witnessed the smoothness of the device. Everyone present there appreciated the build quality of the device. The motor, Handpiece, combs, and cutters worked efficiently. The RuTAG team arranged refreshments for the participants. On the following day (Sept. 15), the IITD team visited Gaya Village and met Mr. Urgain. Mr. Urgain is the local shepherd and head of Gaya village. Mr. Urgain used the device developed by IIT Delhi. He requested IITD team to develop an indigenous comb (Fig. 8) to remove the woolen fiber from Pashmina sheep. IITD team assured him for the support. The IITD team handed over the newly developed grinder for the combs and cutters. On Sept. 16 and 17, IITD team visited Nubra Valley and Pangong Valley (Fig. 9) and met local shepherds to assess the use of machine shearing in the region. The team gathered the data for further activities.

Academic Outreach Day @ IITD Sonipat Campus

RuTAG IITD team exhibited some of the ready-to-disseminate technologies at Academic Outreach Day 2022, held at IIT Delhi's Sonipat Campus on July 30, 2022. Mr. Yashwant Prasad, Mr. Ashish Dahiya, and Ms. Anoushka Arya attended the event (Fig. 10). The team demonstrated Sheep Shearing Device and Tulsi Mala Bead Making Device at the event.



Fig. 10: RuTAG stall at Academic Outreach Day

Tech4Seva @ IIT Delhi

Tech4Seva event was organized by Unnat Bharat Abhiyan, Regional Coordinating Institute, New Delhi, on Aug. 5, 2022, at Lecture Hall Complex, IIT Delhi. RuTAG team exhibited three technologies at the event, namely, Tulsi Mala Making Device, Ground Water Level Measuring Device, and Sheep Hair Shearing Device. The technologies were evaluated by various faculty and members of Unnat Bharat Abhiyan. Sheep Hair Shearing Device won the 1st prize (Fig. 11) for the best technology award.



Fig. 11: 1st prize certificate won by RuTAG team in Tech4Seva event

National Conference at Lucknow (September 15-16, 2022)

Two days National Conference on “Smart Village Panchayat: Empowering Rural Communities; Leaving No One Behind” held at Indra Gandhi Pratishthan, Lucknow, Uttar Pradesh during Sept. 15-16, 2022. Honorable Chief Minister of Uttar Pradesh, Shri Yogi Aditya Nath, visited the conference. Dr. Ketaki Bapat (Scientist G, PSA Office), Mr. Raj Kumar Gupta, and Mr. Mangal Sharma (RuTAG IIT Delhi), Prof. J. Ramkumar (RuTAG IIT Kanpur) visited the conference. Dr. Bapat presented (Fig. 12) RuTAG technologies. RuTAG team exhibited (Fig. 13) Tulsi mala bead-making device, Groundwater level measuring device, Soil Organic Carbon Detection Kit, and posters of compact Vertical Multilayer Vermicomposting Unit, Smart Vending Cart, BDT, and Metallic Carpet Loom, etc.

RuTAG IITD team interacted with various other participants. Some of the participants were Mr. Waseem Khan (Jammu & Kashmir), Akhilesh Gautam (Noida, Uttar Prades) for Vertical Multilayer Vermicomposting Unit, and Mr. Sridhar Sivalenka, Hesa Enterprises Pvt. Ltd., Sainikpuri, Hyderabad for RuTAG other technologies.



Fig. 12: Dr. Ketaki Bapat presenting RuTAG Technologies



Fig. 13: RuTAG stall at the conference

A visit to Arunachal Pradesh during Nov. 13-20, 2022

RuTAG IIT Delhi team (Mr. Raj Kumar Gupta and Mr. Mangal Sharma) visited the Department of Textile and Handicrafts, Itanagar, Arunachal Pradesh, during Nov. 13-20, 2022. Also visited three centers, one in Doimukh, nearly 40 km from Itanagar, and the other two in Miao district, Arunachal Pradesh, 400 km from Itanagar. This visit was made to observe the feasibility of using the Metallic loom developed by RuTAG IIT Delhi in the Arunachal region. The following styles of existing looms were observed during the visit:

Tibetan Wooden Loom: In Doimukh, it was observed that artisans use a traditional wooden loom (Figs. 14 and 15), and tension to the warp is provided by inserting the wooden block (100mm) with the help of a wooden lever at the bottom of both side of the lower beam. The lower beam needs replacement after 8-12 months. The cost of the Tibetan wooden loom of size (4x6) feet is about Rs. 10,000/-.



Fig. 14: Tibetan Wooden Loom



Fig. 15: Carpet Weaving



Fig. 16: Tibetan Metallic Loom

Tibetan Metallic loom: At one of the other centers, the artisans use a Tibetan metallic loom (Fig. 16), and the tension to the warp is provided by rotating the leadscrew with the help of levers on both sides. Upper and lower beams usually bend due to the tension on the warp. It was observed that no proper seating arrangement was provided to the loom. The lead screw of the lower beam also shifts and gets damaged/bent due to load. The Tibetan metallic loom size (4x6) feet cost about Rs. 25,000/-. The ruTAG team noted the observations and further activities will be planned accordingly to install the looms.

Updates of smart vending cart @ IIT Delhi



Fig. 17: Thela Samraat Model 1 in field

Field Trial, Demonstration and Feedback of Thela Samraat Model - 2

Considering the objectives to be achieved, the designed cart was to be receptive to the real-world environment. For a close eye on it, the Weekly markets of Saket and South Ex in Delhi were chosen, and two vendors, Harpal and Sunil, were made a part of the realization as they were impressed by the cart's looks and aesthetics. The cart was also demonstrated to the visitors at Inventiv 2022 and Industry Day 2022 at IIT Delhi (Figs. 17 and 18). During these trials, our efforts were well appreciated by the vendors and customers. Not only does the cart seem to diversify the livelihood activities, but also the sanitized, deliverable, and selection experience for the end user (be it the customer or the vendor) makes it convenient even for someone passing by the cart. Important required modifications were recorded from these trials. The final event to demonstrate three models developed at IIT Delhi was held on Dec. 24, 2022 (Fig. 19).

About 25 street vendors from nearby areas gathered at Kalyan Mandapam of IITD campus. Prof. Godara, Prof. Saha, Mr. Anuj, Mr. Rajiv, Mr. Akhilesh, Mr. Yashwant, and Mr. Raj Kumar were also present.

Observations

The RuTAG team at IITD has come up with some simple additions to the traditional vending cart, which is a popular way to sell fresh fruits and vegetables by vendors across the nation. These simple additions are so designed to be easily adapted to compete with the new market entrants. The intention is to improve the vending cart user's quality of life and income by reducing waste and making it easy to maneuver. The elegance of the solution is that these features can be added to any traditional cart as an upgrade, meaning that the vendors will not have to purchase a new cart which will be a huge relief since most of the people in the field can't invest huge amounts of capital.



Fig. 18: Field trial in local market

Features

The team has designed three carts till now. One cart design is also being tested inside the IIT Delhi campus and has been operational since November 2021. Designed vending carts provide extra space for displaying more fruits and vegetables with the integration of extendable arms. For the convenience of customers, the fruit and vegetable trays are placed at an easy-to-reach height on these extendable arms. It has evaporative cooling inside to increase the shelf-life of fruits and vegetables at a very low cost. The cart has DC-powered attractive energy efficient DC LED lighting to save electricity, to make the selling process convenient in the late evening to attract customers. In the second model, a foldable rooftop gives a cool shadow for the vendor to work on hot summer days. In addition, required features like the stainless-steel surface, etc., for good hygiene and other necessary facilities have also been provided to increase the livelihood of a vegetable vendor.



Fig. 19: Vending Cart Demonstration and Awareness Workshop with vendors at IITD

Summer internship 2022 @ RuTAG IITD

RuTAG IITD conducted a summer internship in 2022 for IITD students. The internship methodology for the same is based on Team-based Online projects (TOP) innovated by Prof. S. K. Saha. Out of 324 students who applied for the internship, 220 students were selected. A total of 44 teams consisting five students each were formed. After the final evaluation, 138 students completed the internships who were awarded 1 Design Credits as per IIT Delhi's course requirement.



Fig. 20: Sh. Upendra Prasad inaugurating the session

Stakeholder's Meeting at Jaipur held by CWDB

A stakeholder's meeting was held by Central Wool Development at Hotel Clarion, Jaipur, during Sept. 23-24, 2022. Sr. Upendra Prasad (Secretary, Textile Ministry), Mrs. Prajakta L. Verma (Joint Secretary, Textile Ministry), and Sh. Gordhan Raika (Chairman, CWDB) were the main guest of the event (Fig. 20). Stakeholders from various state wool boards attended the meeting. Prof. S. K. Saha, Mr. Ashish, and Mr. Davinder Pal Singh from RuTAG IIT Delhi also joined the meeting. After a briefing by Sh. Gopal Bhati (Executive Director, CWDB), Prof. S. K. Saha (Fig. 21) gave a presentation on Sheep Shearing Device developed by IIT Delhi.



Fig. 21: Prof. S. K. Saha addressing the participants

Visit to Banskho Village

After the exciting discussions on the future of machine shearing and various other wool sector-related topics, a visit to the nearby village, Banskho was made. The visit focused on the ongoing activities of a local carpet company, Vimla International (Fig. 22). A loom made by IIT Delhi was also displayed there.



Fig. 22: Visit to Vimla International at Banskho village



Fig. 23: Technical demonstration at Avikanagar

Technical Demonstration @ CSWRI Avikanagar

On the next day, a demonstration (Fig. 23) of the Sheep Shearing Device developed by IIT Delhi was held at CSWRI Avikanagar. The demonstration was planned for the proliferation of machine shearing in India. The device performed flawlessly and was appreciated by everyone. All the stakeholders, including Sh. Gopal Bhati (ED, CWDB) and Sh. Anurag Purohit (CWDB) were present during the demonstration.

Industry Day @ IITD

RuTAG IITD exhibited ready-to-disseminate technologies on Industry Day 2022 (Fig. 24), held at Lecture Hall Complex, IIT Delhi, on Dec. 10, 2022. Various industries and IITD startups participated in the exhibition. RuTAG team exhibited Sheep Shearing Device, Ground Water Level Measuring Device, Tulsi Mala Making Device, and Smart Vending Cart.



Fig. 24: RuTAG Stall at Industry Day



Fig. 25: Group photo of 100th WeLD session



Fig. 26: Group photo of the participants

WeLD, WeLD-R, WeLD-MI, and WeLD-ER

We learn through discussion (WeLD) is an innovative idea by Prof. Saha for the collaborative growth of students, staff, faculty, etc. Now, various WeLD sessions have been started, such as We learn through discussion at RuTAG (WeLD-R), We learn through discussion at Multi-Institutional (WeLD-MI), We learn through discussion at EPICS and RuTAG (WeLD-ER). Recently 100th WeLD session (Fig. 25) was celebrated at the ME Seminar Room, IITD, in which alumni students of Prof. S. K. Saha, associated faculty, and staff joined.

A multilingual glance at our recent newsletters

For our recent newsletters, please visit: <http://rutag.iitd.ac.in/rutag/?q=rutag-newsletter>

RuTAG এর আঞ্চলিক কর্মশালা

Bengali

RuTAG আইআইটি দিল্লি সিএফপি এবং খামির - এর সহযোগিতায় ২৫ ও ২৬ শে এপ্রিল, ২০২২-এর মধ্যে গুজরাটের ভুজে একটি আঞ্চলিক কর্মশালা (চিত্র 9) পরিচালনা করেছে। প্রোগ্রামে প্রায় ১৩০ জন অংশগ্রহণকারী উপস্থিত ছিলেন। প্রফেসর এস. কে. সাহা একটি ভেড়ার লোম কাটার যন্ত্র, কার্পেট লুম, কার্পেট পরিষ্কারের মেশিন এবং বুননের জন্য অন্যান্য সরঞ্জাম তৈরির তার যাত্রার কাহিনি শুনিয়েছেন। অন্যদিকে, শ্রী যোগেশ্বর কুমার RuTAG আইআইটি রুরকি দ্বারা তৈরি একটি ফেল্টিং মেশিন উপস্থাপন করেন। এই উপস্থাপনাটি ফেল্টিং মেশিনের একটি বাস্তব প্রদর্শন দ্বারা অনুসরণ করা হয়েছিল। আইআইটি দিল্লির একটি নতুন উন্নত কার্ডিং মেশিনের প্রদর্শনীও পরিচালিত হয়েছিল (চিত্র 26)। প্রফেসর ভূপিন্দর গোদারা আইআইটি দিল্লিতে একটি স্মার্ট ভেডিং কার্টের একটি সাম্প্রতিক ডিজাইন এবং বিকাশ শেয়ার করেছেন। ভুজে শ্রী রামজু ভাই খুস্বরের বাসভবনে সমানতালে শক্তি-দক্ষ মৃৎশিল্পের ভাটার প্রশিক্ষণ ও প্রদর্শনের আয়োজন করা হয়েছিল। শ্রী দীপেশ বুচ RuTAG আইআইটি দিল্লির সমস্ত প্রতিনিধি এবং এগ্রো সেল ইন্ডাস্ট্রিজ, কচ্ছ ক্রাফ্ট কালেক্টিভ, শ্রুজন ট্রাস্ট, এলএলডিসি, খামির, ডিজাইনার এবং কচ্ছের কুমোরদের অংশগ্রহণকারীদের স্বাগত জানিয়েছেন। অধ্যাপক এম.আর. রবি নতুন ভাটির বিশেষত্ব সম্পর্কে অবহিত করেছেন। তিনি ব্যাখ্যা করেন কিভাবে ইটের গাঁথুনিতে হুঁদুরের ফাঁদ বন্দ ব্যবহার করে তৈরি আপড্রাফ্ট ভাটার জ্বালানি খরচ কমাতে সাহায্য করে। শ্রী দবিন্দর পাল সিং ভাটির নকশা, নির্মাণ পদ্ধতি এবং ফায়ারিং প্রক্রিয়া ব্যাখ্যা করেছেন। পরে শ্রী রামজু ভাই কুস্তর ভাটা নির্মাণের অভিজ্ঞতা শেয়ার করেন। ভুজে নির্মিত নতুন ভাটা উদ্বোধন করা হয়, এবং কুমোরদের কাছ থেকে মতামত নেওয়া হয়। কুমোররা বিভিন্ন আকারের ভাটির পরামর্শ দেয় যা তাদের ফায়ারিং প্রয়োজনীয়তা পূরণ করতে পারে। উল প্রক্রিয়াকরণ কর্মশালায় অংশগ্রহণকারীদের চারটি দলে বিভক্ত করা হয়েছিল এবং দলগুলি চারটি ভিন্ন সম্প্রদায়ের ক্লাস্টার পরিদর্শন করেছিল। পরিদর্শন করা স্থানগুলি হল ভাঙ্কর ভালজি বিশ্রাম, ভুজোদি; খরদ তাঁতি (শ্রী তেজশী ভাই); সানোসারা (পালকদের সাথে যোগাযোগের জন্য), এবং এনজিও হুনারশালা। RuTAG আইআইটি দিল্লির অধ্যাপক এম.আর. রবি এবং শ্রী দবিন্দর পাল সিং আনজার এবং টুনাতে মৃৎশিল্পের ক্লাস্টার পরিদর্শন করেছেন। খামিরের এই সফরের সমন্বয় করেন শ্রী দীপেশ বুচ। অঞ্জরের কুমোররা খেলনা রান্নার জন্য একটি আয়তাকার ভাটা ব্যবহার করে। ধন্যবাদ জ্ঞাপন করেন অধ্যাপক এম.আর. রবি এবং মিস গুঞ্জন সতিজা। প্রফেসর এম.আর. রবি ভুজে আঞ্চলিক কর্মশালার আয়োজন করার জন্য সিএফপি এবং খামিরকে ধন্যবাদ জানান। তিনি কর্মশালায় অংশগ্রহণ এবং মূল্যবান ইনপুট প্রদানের জন্য সমস্ত অংশগ্রহণকারী সংস্থাকে ধন্যবাদ জানান।

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IIT ఢిల్లీచే స్కార్ట్ ఆకు కూర/కూరగాయల బండి అభివృద్ధి

Telugu

RuTAG, IIT ఢిల్లీ స్కార్ట్ ఆకు కూర/కూరగాయల బండిను అభివృద్ధి చేసింది, ఇది మరిన్ని పండ్లు మరియు కూరగాయలను ప్రదర్శించడానికి అదనపు స్థలాన్ని అందిస్తుంది. ఇది చాలా తక్కువ ఖర్చుతో పండ్లు మరియు కూరగాయల దీర్ఘకాలము పెంచడానికి లోపల బాష్పీభవన శీతలీకరణను కలిగి ఉంటుంది. వెండింగ్ కార్డ్ యొక్క ప్రత్యేక లక్షణం లిఫ్ట్ మరియు టర్న్ మెకానిజం, ఇది చిన్న ప్రయత్నంతో మాత్రమే బండిని తిప్పడంలో విశేషకు సహాయపడుతుంది. ఇది విద్యుత్తును అదా చేయడానికి మరియు ఎక్కువ గంటలు బ్యాటరీని అమలు చేయడానికి DC పవర్డ్ ఆక్సీజీయమైన లైటింగ్ను కలిగి ఉంది. మడత రూఫ్టాప్ వేడి వేసవి రోజులలో పని చేయడానికి విశేషకు చల్లని నీడను ఇస్తుంది. కూరగాయల విక్రయదారుల జీవనోపాధిని పెంచడానికి మంచి పరిశుభ్రత మరియు ఇతర అవసరమైన సౌకర్యాలు అందించబడ్డాయి. మొదటి విజయవంతమైన నమూనా (Fig. 3) దక్షిణ క్యాంపస్లోని కళ్యాణ మండపం ఎదురుగా ఉపయోగించబడుతోంది మరియు రెండవ నమూనా IIT ఢిల్లీలోని వైశాలి మరియు తక్కిలా అపార్ట్మెంట్ల దగ్గర నడుస్తుంది

నిలువు బహుళస్థాయి వర్మి కంపోస్టింగ్ వస్తవు

PI - ప్రొఫెసర్ S. K. సాహా, మెకానికల్ ఇంజనీరింగ్ విభాగం, IIT ఢిల్లీ

Co-PI - ప్రొఫెసర్ సత్యవతి శర్మ, CRDT, IIT ఢిల్లీ; ప్రొఫెసర్ బల్బీర్ సింగ్, డిపార్ట్మెంట్ ఆఫ్ మెచ్. ఇంజి. SMVDU, కర్ణాటక, కర్ణా, J&K; డా. కల్పనా అరోరా, SESS, న్యూఢిల్లీ.

సహకరిస్తున్న NGO - సెంటర్ ఫర్ టెక్నాలజీ అండ్ డెవలప్మెంట్ (CTD), న్యూఢిల్లీ

నిలువు బహుళస్థాయి వర్మి కంపోస్టింగ్ వస్తవు యొక్క కొత్త మోడల్ను IIT ఢిల్లీ ప్రాంగణంలో రూపొందించారు, మరియు పరీక్షించారు. కొత్త సంక్షిప్త వర్మి కంపోస్టింగ్ వ్యవస్థ యొక్క ప్రయత్నాలు జూన్ 06, 2022 నుండి ప్రారంభమయ్యాయి. పరీక్ష కోసం ఉపయోగించే పదార్థాలు ఆవు పేడ, గుర్రపు పేడ మరియు వంటగది వ్యర్థాలు. జాతీయ పంచాయతీ దినోత్సవం 2022 నాడు గౌరవప్రదమైన ప్రధాన మంత్రి శ్రీ నరేంద్ర మోదీ సందర్శన సందర్భంగా జమ్మూలోని పల్లిలో కొత్తగా అభివృద్ధి చేయబడిన వ్యవస్థ కూడా ప్రదర్శించబడింది. కాంపాక్ట్ సిస్టమ్లోని కొన్ని ముఖ్యమైన లక్షణాలు దీనిని కాంపాక్ట్ స్పేస్లు, పార్కులు, రోడ్సైడ్లు మొదలైన వాటిలో ఉంచవచ్చు. ఈ యూనిట్ మూడు స్థాయిల వ్యవస్థను కలిగి ఉంది, ఇది గరిష్టంగా 3 పూర్తి సైజు డబ్బాలను నిల్వ చేయగలదు. వానపాములకు సరైన గాలిని అందించడానికి యూనిట్ ముందు మరియు వెనుక భాగంలో చిల్లులు కలిగిన షీట్లను కలిగి ఉంది, దీని ఫలితంగా వేగంగా కంపోస్ట్ చేయడం, కంపోస్ట్ యొక్క మెరుగైన నాణ్యత, మెరుగైన సామర్థ్యం మరియు వానపాముల జీవితకాలం పెరుగుతుంది. ఈ వస్తవు మెరుగైన నాణ్యత కోసం కంపోస్ట్ కు నీటిని పిచికారీ చేయడానికి స్ప్రింకల్లర్ వ్యవస్థను కూడా కలిగి ఉంది.

స్ప్రీట్ సైజింగ్ సిస్టమ్

PI - ప్రొఫెసర్ సామ్రాట్ ముఖోపాధ్యాయ, టెక్నోలజీ ఇంజనీరింగ్ విభాగం

IIT ఢిల్లీ సహకార NGO - రాష్ట్ర చేనేత జన సమాఖ్య (RCJS), ఆంధ్రప్రదేశ్

చీరాల హ్యాండ్లూమ్ క్లస్టర్ కోసం మరియు సమర్థత మరియు సమర్థవంతమైన స్ప్రీట్ సైజింగ్ సిస్టమ్ను అభివృద్ధి చేయడానికి మా ఇటీవలి ప్రయత్నాలకు కొనసాగింపుగా. IIT ఢిల్లీలోని టెక్నోలజీ డిపార్ట్మెంట్లో రూపొందించబడింది మరియు పరీక్షించబడింది పూత యొక్క సాంప్రదాయ పద్ధతిని మెరుగుపరచడానికి యూనిట్ రూపొందించబడింది. ఈ యూనిట్ హీటింగ్ రోలర్లు మొదలైన వాటితో సమర్థవంతంగా పనిచేస్తుంది. యూనిట్ను పరీక్షించడానికి ఇద్దరు కళాకారులను చీరాల నుండి IIT ఢిల్లీకి పిలిపించారు. ట్రయల్ విజయవంతమైంది కానీ మరియు పరీక్షించాల్సిన అవసరం ఉంది.

Translated by Esther Swarna, Technology Head, IHFC IITD

पल्ली पंचायत में राष्ट्रीय पंचायत दिवस 2022 पर तीन दिवसीय प्रदर्शनी पर पीएम मोदी का दौरा

Hindi

पल्ली पंचायत (सांबा जिला, जम्मू-कश्मीर) में राष्ट्रीय पंचायत दिवस 2022 पर तीन दिवसीय प्रदर्शनी का आयोजन किया गया था। इस प्रदर्शनी में भारत के माननीय प्रधानमंत्री, श्री नरेंद्र मोदी भी पधारे थे। 28-29 अप्रैल 2022 के दौरान रुटाग आई. आई. टी. दिल्ली की तरफ से डॉ. केतकी बापट (वैज्ञानिक 'G', पी. एस. ए कार्यालय), श्री राज कुमार गुप्ता, और श्री राजीव शर्मा प्रदर्शनी में शामिल हुए थे। रुटाग आईआईटी दिल्ली की टीम ने प्रदर्शनी में तीन उपकरणों (एक कॉम्पैक्ट वर्टिकल मल्टीलेयर वर्मीकम्पोस्टिंग यूनिट, स्मार्ट वेंडिंग कार्ट और भूजल स्तर मापने का उपकरण) का प्रदर्शन किया था। अन्य रुटाग केन्द्रों ने प्रदर्शनी में हिस्सा लिया और वेंडिंग कार्ट्स का प्रदर्शन किया था। आई. आई. टी. दिल्ली की टीम ने अन्य प्रतिभागियों के साथ बातचीत भी की। प्रतिभागी विभिन्न संगठनों और विश्वविद्यालयों से थे - जैसे कि जम्मू विश्वविद्यालय, नाबार्ड, सांबा, जम्मू-कश्मीर, सवेरी कॉलेज ऑफ इंजीनियरिंग, पंढरपुर और बागवानी विभाग, सांबा। प्रतिभागियों ने रुटाग टीम के साथ बातचीत की और प्रदर्शित कुछ तकनीकों को अपने क्षेत्रों में को लागू करने में रुचि दिखाई।

Translated by Apoorva Tripathi, Ph. D. Scholar, IITD

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