

IJIRA

NEWSLETTER

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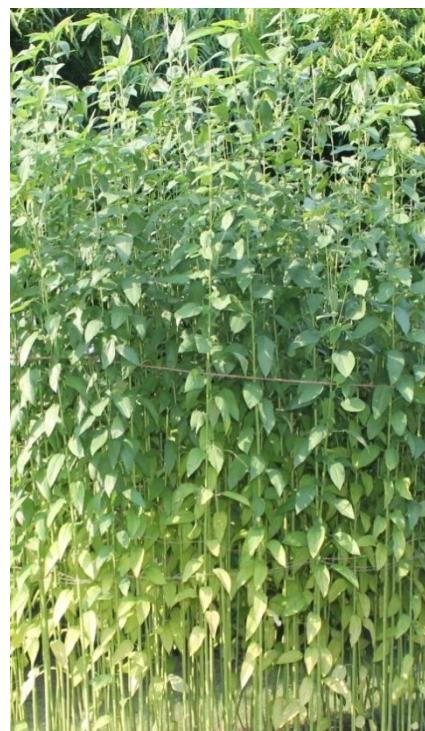
From the Desk of the Director

- ❖ In continuation to IJIRA's focus of introducing automation and instrumentation in jute industry, novel pneumatic control roll former has been installed in industry in order to reduce irregular compactness along with oil contamination. It's performance is under evaluation.
- ❖ Cost effective production of pulp for sanitary napkin has been developed at laboratory stage as import substitution.
- ❖ Technology development for bamboo fiber production has been initiated with focus on eco-friendly and sustainability for rural industrialization and employment generation through creation of production clusters in rural areas and alignment with several SDGs.
- ❖ Easy draft change technology for spinning frame (EDCS) is getting acceptance in the industry – an example of commercialization of IJIRA's innovations.
- ❖ Upgradation of analytical facility in chemical and physical testing laboratories has been accomplished which has given confidence among European buyers about IJIRA's capability for certification of exportable materials.
- ❖ Two teasers for International Conference have been circulated to all stakeholders
- ❖ Installation of additional equipments in soil testing laboratory in IJIRA-NERC is under progress
- ❖ A plot of land in IJIRA-NERC premise is being developed as demo-center for effectiveness of newly developed cost effective agromulch.

Dr. A. K. Sharma
Director, IJIRA

*Technology No. 1:***PULP FOR SANITARY NAPKINS – IMPORT SUBSTITUTION**

For pulp production, raw materials such as jute sticks, bamboo branches, jute plant & bamboo branches in combination with jute plant were used and techno-economics of pulp production was worked out. It was found that among above fiber mix, jute stick is the most economic raw material for production of pulp.

*Green Jute Plant**Bleached Pulp*

Technology No. 2:

TECHNOLOGY FOR NATURAL BAMBOO FIBER

Technology development for bamboo fiber production has been initiated with focus on eco-friendly and sustainability for rural industrialization and employment generation through creation of production clusters in rural areas and alignment with several SDGs, namely, SDG-8 (Decent work and economic growth), SDG-9 (Industry, Innovation and Infrastructure) and SDG-12 (Responsible consumption and production)



Extracted Bamboo Fiber

Technology No. 3:

EASY DRAFT CHANGE SYSTEM (EDCS)

This IJIRA's innovation towards automation & instrumentation in the spinning frame has been installed in two mills as per Industry's demand. This is another example of IJIRA's expertise in "Crossing the death valley of Innovation" and bringing its innovation into commercialization.



*Easy Draft Change System
(EDCS)*



*Easy Draft Change System (EDCS) successfully running in
Industry*

Technology No. 4:

FIRST EXPORT OF IJIRA'S TECHNOLOGY

IJIRA's Biochemical Root Softening technology has been exported to Jute Alliance Ltd.,

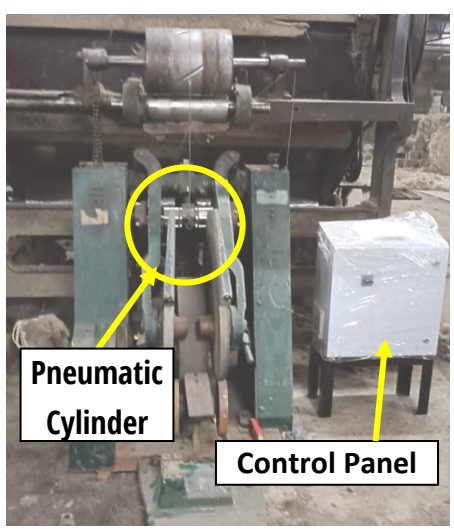
M/s. Jute Alliance Ltd. has become first foreign associated member of IJIRA. It has signed a MoU for technology transfer. Arrangement for transfer of technology is under progress. The Industry has already deposited technology fees.



Technology No. 5:

PNEUMATIC CONTROLLED ROLL FORMER AT CARDING MACHINE

In continuation to IJIRA's focus of introducing automation & instrumentation in jute industry, a novel pneumatic based roll former has been installed in a jute mill in order to eliminate irregular compactness of rolls and oil contamination. The effectness of the technology at industry level is under investigation.



Technology No. 6:

FARMER FRIENDLY DIGITAL MOISTURE METER

IJIRA in collaboration with Webel-Fujitsu-Vara, CoE, Industry 4.0, an initiative of Dept. of IT&E, Govt. of West Bengal has initiated a concept to use 3D printing technique to make outer case of the moisture meter using ABS for better aesthetic look and lighter weight.



New interface has designed for the new instrument

Technology No. 7:

USE OF ECO-FRIENDLY LUBRICATION FOR JUTE FIBER PROCESSING TO MEET EUROPEAN NORMS FOR MOSH-MOAH

Traditional jute processing often uses petroleum-based products which introduces MOSH & MOAH concentration higher than upper limits being introduced through new European norms. MOSH & MOAH are considered to be potential carcinogenic materials. A novel method developed by IJIRA replaces up to 80% of these materials with sustainable alternative, maintaining functional properties of jute without compromising fiber quality. This eco-friendly replacement provides lubrication, softening, and binding while ensuring food grade jute bags meet new European food-grade standards. This method has been implemented in two jute mills on trial basis. However, further trials, especially in winter, are needed to fully assess its potential use for food-grade jute bag production.

UPGRADATION OF ANALYTICAL FACILITY

❖ *Chemical Testing and Certification:*

Inclusion of State of art analytical facility for certification of export goods

In a move set to revolutionize monitoring of food contamination, installation of a new Online-LC-GC-FID instrument marks a significant leap forward by IJIRA in the detection and analysis of MOSH (Mineral Oil Saturated Hydrocarbons) and MOAH (Mineral Oil Aromatic Hydrocarbons). These compounds, frequently found in food products, present significant health concerns. Inclusion of this advanced analytical technology was essential to bring confidence among the European buyers of Food Grade Jute bags that presence of MOSH & MOAH in food items in cocoa and coffee, if detected, is not due to transmigration from the packaging material like jute bags.



❖ *Physical testing and certification:*

Installation of new 100 kN Tensile Testing machine

A new Tensile testing machine (UTM) of Maximum capacity 100 kN has been installed in IJIRA Physical testing laboratory. Tensiometer is also attached with the machine to measure tensile strength along with exact elongation %. A set of Bollard Grips have also been procured to measure strength and elongation of natural and synthetic ropes having dia upto 40 mm.



UTM of Capacity 100 kN.

- NABL audit completed for IJIRA Jute Moisture Meter calibration lab on 24th and 25th September, 2024

SKILL INITIATIVES

- ❖ Assessment of Skilling programme under PMKVY 4.0
- ❖ Jr. Supervisor in Jute Spinning (at IJIRA Kolkata and Gloster Ltd): 60 Nos.
- ❖ New Training Centre created at Kankinarrah Co. Ltd., North 24 Pgs., WB for Skilling Courses under PMKVY 4.0 and skilling programme is in progress at mill premise
- ❖ Fitter Helper - Weaving: 17 Nos.
- ❖ New Training Centre for Skilling of Tribal and backward candidates created at Ananda Marga Pracharak Sangha at its Purulia Centre, of Courses on “Jute Product Stitching Operator” under PMKVY 4.0.
- ❖ Advanced Diploma course on “Jute Technology and Automation” of IJIRA has been affiliated by WBSCTEV&SD
- ❖ Lab Training and Awareness program for NABL accreditation was carried out at Birla Jute Mill premises
- ❖ Stakeholder committee of NCVET approved following three new Qualification Pack and Model curriculum
 - 1) Manufacturing Technician with Elective 1 – Jute Yarn and Elective 2 – Jute Fabric
 - 2) Jute Machine Maintenance Technician with Elective 1 – Spinning Machinery and Elective 2 – Weaving Machinery
 - 3) Quality Control Technician (Jute Production)
- ❖ Shri Avijit Das, Lead Assessor and Shri Himadri Roy, Technical Assessor conducted NABL Audit for Onsite re-assessment for IJIRA calibration laboratory for renewal of accreditation



Training at Kankinarrah Co. Ltd., North 24 Prgs.,WB



Assessment of Skilling programme under PMKVY 4.0 at IJIRA Kolkata

TESTING / CONSULTANCY SERVICES

Performance of service department in the month of September 2024 –

	Physical Testing	Chemical Testing
Sample tested	11	95
Moisture Meter calibrated	46	-
FGJP Lot inspected & tested	-	08

	Inspection	Consultancy
No. of bales of B. Twill bags	1.36 Lakh	-
Consultancy to Mills	-	02

SUBMISSION OF PROJECT UNDER NTTM SCHEME

In line with IJIRA's mission on "Sustainable Indian Textile Development : Fastening Rural Industrialization and Employment through Eco-friendly cluster based Fiber production to address SDG Goals" A project entitled "Optimization of extraction technique for sustainable natural bamboo fiber production" as Phase-I of the mission has been submitted by IJIRA for funding under NTTM scheme of Ministry of Textiles, Government of India.

EVENTS

- ❖ The Director, IJIRA attended 2nd Edition of Middle East Composites & Advanced Materials Show at Sheikh Saeed Hall 1 & 2 & Trade Centre Arena, Dubai World Trade Centre, Dubai, UAE held from September 10-12, 2024.

The Director, IJIRA was invited to deliver a talk on sustainable composites. The title of his presentation was "*Sustainable Practices in the Composites Industry: Navigating Recycling, Reuse, and Minimizing Environmental Impact*".

- ❖ The Director, IJIRA was invited as Guest of Honour in the Hindi Pakhwada Samaroh, 2024 organized by NINFET, Kolkata for National Hindi Scientists Community (Rashtriya Hindi Vaigyanik Sangosti) on 26th September, 2024. He has also inaugurated the programme along with the Director, NINFET and other dignitaries
- ❖ A tripartite agreement has been signed with Bhowmic Calculator (Jute m/c manufacturer) and Sags Control Pvt. Ltd. for commercialization of fully automated jute spinning frame.
- ❖ A non-disclosure agreement has been signed between Webel-Fuzitsu-Vara and IJIRA for development of ABS made moisture meter outer case for lighter weight as well as developing a prototype baxter flyer assembly using jute stick powder/nano-cellulose/bamboo dust through additive manufacturing technology (3D Printing).
- ❖ The Director held meetings with Shri Rajeev Saxena, Joint Secretary, Shri Ashok Malhotra, MD, NTTM, Shri Prashant Kumar Meena, JMD, NTTM and Shri Ajay Pandit, JMD, NTTM on 22nd September, 2024 for finalization of International Conference programme.
- ❖ The Director has been asked by the organizers of SPE's Plastics in Sustainability: Biopolymers and Biocomposites, USA, to deliver a talk entitled "*Light-weight, Green composite component for mobility sector*" through webinar on November 4-6, 2024.
- ❖ IJIRA team including the Director, held meetings with Dr. Lakshmanan.S, IAS, Secretary, Dept. of Industry, Govt. of Assam and Senior Officials of North Frontier Railway for necessary collaboration in International Conference to be held at Guwahati on December 1- 2, 2024.



International Conference on
NbS for Sustainability & Climate Change



SUNDAY KEYNOTE

Speaker: **Mr. V. K. Saraswat**
*Hon'ble Member
 Niti Ayog, Govt. of India
 1st December, 10:35 AM*



SPECIAL ADDRESS

Speaker: **Kartikeya Sarabhai**
Padamshree

MONDAY KEYNOTE

"Key Performance Targets of Natural Plant Fiber based Composites for High Performance Applications: Moving towards Carbon Neutrality & Sustainable Growth"

Speaker: **Prof. Hom Nath Dhakal**
*Portsmouth Centre for Advanced Materials & Manufacturing,
 (PCAMIN), University of Portsmouth, UK.
 2nd December, 10:20 AM*



SPECIAL ADDRESS

"Leadership and Atmanirbhar lessons from Train 18/Vande Bharat project"

Speaker: **Dr. Sudhanshu Mani**
*Leader Vandebharat Project, Indian Railways
 2nd December, 10:00 AM*



"Sustainability Landscape for Technical Textiles"

Speaker: **N. Sondhi**
*Gherzi, Switzerland
 2nd December, 09:15 AM*



BOOK YOUR CONFERENCE TICKET

Don't miss out—register online/ offline now to secure your spot at IJIRA's International Conference. Join us for discussions, keynotes, and networking opportunities.

Register for

- 2-Day Conference Ticket
- One Day Conference Ticket
- Exhibition (Stalls are limited)
- Sponsor/ Advertisement

We look forward to welcoming you!

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For more detail please visit website: <https://ijira.org.in/international-conference/> Or scan



International Conference NbS for Sustainability & Climate Change

Assam, India 2024

2 Days / +17 Speakers / +200 People

3 Pavilions / +10 Stall / +14 Countries

Ramie, Bamboo, Jute for Sustainability

Auto, Marine & Defence Applications

Soil Erosion Protection

Food Grade Packaging

Semi Structure & Structural Applications

**Be a part of the largest
Natural Fiber Conference in India**

Speakers from



National Technical
Textile Mission



वस्त्र मंत्रालय
MINISTRY OF
TEXTILES



Breaking the Challenges of
North Eastern Natural Fibers for a Better Future

1st & 2nd December, 2024

Taj Vivanta, Guwahati #NaturalFibersForFuture

Inauguration by:

Shri Giriraj Singh

Hon'ble Minister of Textiles, GOI



Goals

to transform our **World**



For more information



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