

IJIRA

NEWSLETTER

July, 2025/Vol. 13, Issue 7



From the Desk of the Director

✦ Weaving Innovation, Cultivating Impact

At IJIRA, we believe that every fiber holds the power to transform industries—and futures. In this edition, you'll journey through our pioneering efforts to **reengineer bamboo** for scalable, low-cost fiber production, and see **ramie** emerge as a serious contender for both fashion and function in sustainable textiles.

You'll read how **sisal** is getting a stylish upgrade, how our **erosion testing lab** in Guwahati is tackling climate challenges head-on, and how we're **equipping young minds** to power the next wave of natural fiber technologies.

Whether it's smart machines, new blends, or real-world testing, every initiative reflects our core vision: to convert research into rural opportunity, innovation into impact, and natural fibers into the fabric of the future.

Come, explore the threads of transformation...

-- Dr. A. K. Sharma
Director, IJIRA

In this Issue

- New Technologies
- Skill Initiatives
- Testing/Consultancy Services
- Events

Editorial Board

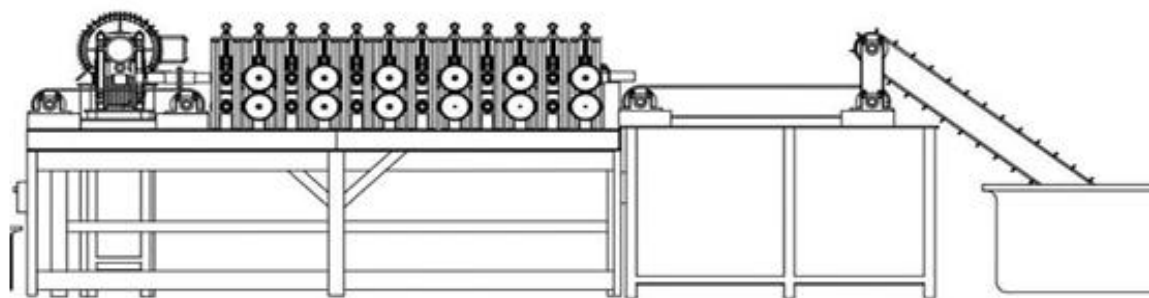
- Dr. PradipChakrabarti
- SoumitaChowdhury
- ParthaSanyal
- Ipsita Roy
- ApsaraNath
- JiteshKayal
- KuntalChakraborty

*Technology No. 1:***Reengineering Bamboo: IJIRA's Innovation Drive for Affordable Natural Fiber****From Strip to Fiber – Smarter Machines, Lower Costs, Greener Future**

IJIRA is driving bamboo fiber innovation with a dual focus on performance and affordability. By redesigning the strip-making machine for higher efficiency and integrating an automatic feeding system into the fiber opening process, the institute is paving the way for low-cost, scalable natural fiber solutions to meet growing industry demand.



IJIRA's Fiber Opener Machine



New attachment for automatic feeding for 1 ton/day capacity

*Technology No. 2:***Ramie Re-imagined: Spinning Finer, Greener Yarns**

In its third breakthrough trial, IJIRA successfully wet-spun a 50:50 ramie-flax blend into fine yarn (~20 lea), marking a major step toward mainstreaming ramie in flax-type spinning systems. With improved sliver handling and spinnability, the path is now open for scaling up and unlocking ramie's potential in premium natural textiles.



Hackling of degummed ramie fiber



Mixing of Hackled Ramie and Flax top in open gill bar drawing



Wet Spinning of Ramie - Flax (50:50) blended yarn

*Technology No. 3:***Ramie, Reinvented: Dry-Spun & Ready for Industry**

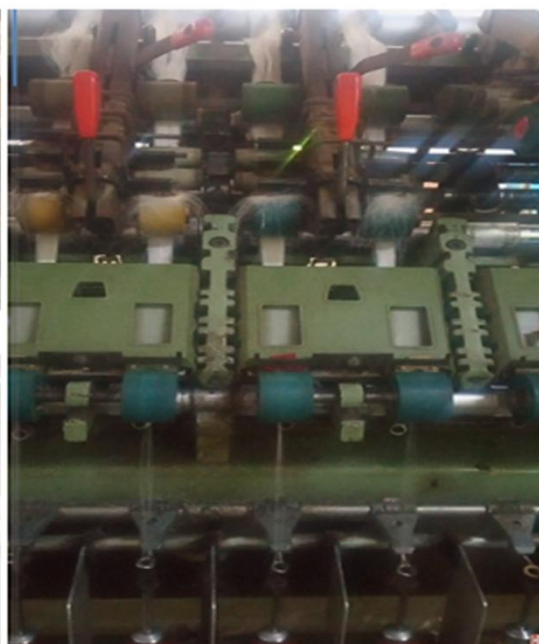
IJIRA has successfully developed a 12 lea yarn from 100% ramie tow using a dry spinning route adapted from flax technology—proving that ramie can be spun without water-intensive processing. This innovation unlocks new potential for strong, sustainable yarns in technical and industrial textiles.



Processing of Ramie Fibre in 5X Card



Combing of 100% Ramie top



Technology No. 4:

Sisal Gets Softer: Blending Strength with Style

IJIRA has unlocked the potential of sisal by chemico-mechanically enhancing its flexibility for finer yarns. A 70:30 jute–sisal blend has successfully yielded 6.75 lb/spy yarn and woven fabric—paving the way for durable, aesthetic home textiles from natural fiber blends.



Jute Sisal Blended Home Textiles

*Technology No. 5:***Erosion under Control: IJIRA's Guwahati Facility Goes Live**

IJIRA's North Eastern Regional Centre has kicked off full-scale shear stress testing to evaluate eco-friendly erosion control solutions tailored for the Northeast's fragile landscapes. With 45 tests across diverse soils and natural fiber blankets, the facility is generating real-world data to power next-gen geotextiles—while also nurturing young talent through hands-on training.



Erosion Control Testing Lab (IJIRA-NERC)

SKILL INITIATIVES

Skilling for the Future: Empowering Talent through Hands-On Innovation

IJIRA is accelerating capacity-building through targeted skilling and internship programs under NTTM, PMKVY 4.0, and GIST 2.0. With 97 trainees enrolled and interns from NIT Jalandhar engaged in real-world research on bamboo fiber processing and erosion control, IJIRA is shaping industry-ready talent for the natural fiber revolution.

Building Futures, Weaving Innovation

IJIRA is nurturing the next generation of technical textile professionals through hands-on skilling and internship programs under NTTM, PMKVY 4.0, and GIST 2.0. From soil erosion studies in Northeast hill slopes to bamboo fiber innovation in Kolkata, young minds are gaining real-world exposure—strengthening both science and self-reliance in sustainable fiber technologies.



**SKILLING
PROGRAMMES**



**INTERNSHIP
SUPPORT**

TESTING / CONSULTANCY SERVICES

Performance of service departments :-

	Physical Testing	Chemical Testing
Sample tested	31	46 (Non-FGJP)
Moisture Meter calibrated	41	-
FGJP Lot inspected & tested	-	03
Process Audit for MOSH-MOAH compliance	-	01
No. of bales of B.Twill/A.Twill bags inspected	1,90,000 approx	
Consultancy /Technical services to Mill(s):	03	
<ul style="list-style-type: none"> - Hukumchand Jute Mills - Daaksh Jute LLP - RDB Textiles 		

EVENTS

- ❖ Director, IJIRA presented project completion report on "Development of different extraction techniques for long bamboo fibers" in review meeting with Shri Ajay Gupta, JS, MoT, Gol.
- ❖ Director, IJIRA gave presentation on *Ladak peak to Innovation* in technical session in EKTA exhibition organized by CWDB in Leh on 3rd July 2025.
- ❖ Director, IJIRA attended TRA review meeting on 31st July 2025.
- ❖ Director, IJIRA discussed IJIRA's development activity related to natural fibers with JS (AG) and with HMoT on 31st July 2025.
- ❖ The 227th Council Meeting was held on 25.07.2025 via VC mode.
- ❖ The 59th Annual General Meeting was held on 30.07.2025 via VC mode.
- ❖ Shri Rajeev Bhalla and team from Birla Jute Mill visited IJIRA for live demonstrations of the Pneumatic-Controlled Roll Former and Maintenance Management Information System (MMIS) on 02.07.2025. The team showed strong interest in both technologies and expressed intent to explore their adoption.
- ❖ Shri Partha Sanyal, Scientist, IJIRA & Smt. Soumita Chowdhury, Scientist, IJIRA attended a meeting (TXD 30) of BIS in VC mode on 15.07.2025.
- ❖ Smt. Soumita Chowdhury visited Empire Jute mill for demonstration of Morah Weight Control and Monitoring System on 16.07.2025.
- ❖ Director, IJIRA, Dr. Pradip Chakraborty, Head, CD & HRD, IJIRA and Shri Partha Sanyal attended a Video Conference with Mr. Frank Stover, CEO, MST Fasertechnik GmbH for Jute based Erosion Control Blanket on 17.07.2025.
- ❖ Shri Gopal Mukhopadhyay, Tech Officer, IJIRA attended Gloster Ltd. on 01.07.25 and 23.07.25 for development of LLDPE laminated Sugar Bag, Type- E.
- ❖ Shri Gopal Mukhopadhyay attended RDB Textiles Ltd. (Unit: Victoria Jute Mills) for development of Cotton-Jute-Sisal Blended fabric on 17.07.2025.
- ❖ Shri Partha Sanyal & Smt. Soumita Chowdhury attended a meeting (TXD 03) of BIS at BIS, Kolkata office on Jute and jute products on 25.07.2025
- ❖ Shri Partha Sanyal attended a meeting with Shri Laxman Basak, Deputy Director, Weavers Service Centre on 28.07.2025.

- ❖ **Shri Partha Sanyal visited AI Champdany Industries Ltd. for making 100% Ramie Yarn of 12 Lea from Ramie Tow on several dates.**
- ❖ **Smt. Ipsita Roy, Senior Microbiologist & In-charge CBPD, IJIRA participated in a coordination meeting with IJMA and the Jute Commissioner's Office at Patsan Bhawan regarding the STDF proposal submission on 24.07.2025.**
- ❖ **Smt. Ipsita Roy attended a technical meeting at IJMA with the Technical Head, IJMA along with SGS & Cotecna teams to provide inputs on the MOSH/MOAH analysis method for the BIS standard draft on 29.07.2025.**
- ❖ **Shri Gopal Mukhopadhyay on behalf of IJIRA participated the celebration of Jute Day 2025 organized by NJB at Patsan Bhawan, Kolkata on 29.07.2025.**
- ❖ **Smt. Ipsita Roy joined a virtual consultation with Dr. Michelle End (International Cocoa Organization) and ECA representatives for technical planning of the STDF project proposal on 28.07.2025 & 31.07.2025.**
- ❖ **Dr. Pradip Chakrabarti along with representative of NTTM visited Skill Development Centre in Naffar Chandra Jute Mills Ltd. on 31.07.25**

Innovating Natural Fibre

for
Sustainable Future

INDIAN JUTE INDUSTRIES' RESEARCH ASSOCIATION

17, Taratala Road, Kolkata – 700 088

Telephone: (033) 6626 9200 * Fax: (033) 6626 9204 * E-mail: ijiraweb@ijira.org.in *

Website: www.ijira.org.in