



Govt. Of West Bengal
Office of the Principal
Govt. College of Engineering & Textile Technology
Berhampore, West Bengal, 742101



Memo No.: 1195/M-1/25

Date: 15.12.2025

To
The Secretary,
Department of Science and Technology & Biotechnology,
Government of West Bengal,
Vigyan Chetana Bhavan,
Kolkata – 700064

**Subject: Submission of Proposal for Organizing Workshop under Science Popularization Program on
“Waste to Wealth” Theme**

Respected Sir,

I am pleased to submit a proposal for conducting workshop titled **“Waste to Wealth: Agro-Waste-Based Sustainable Product Development for Circular Economy”** for consideration under the Science Popularization Program scheme of the Department of Science and Technology and Biotechnology, Government of West Bengal.

The project is being submitted by Dr. Subhasis Das, Head of the Department of Textile Technology, as the Program Coordinator (PC), on behalf of the Government College of Engineering & Textile Technology, Berhampore (GCETTB).

We sincerely request your support for this proposal, which aims to recycle the agro-waste while promoting sustainable and diversified applications of textile product.

The detailed project proposal is enclosed herewith for your kind perusal and necessary action.

We look forward to a favorable response.

Thank you for your attention and continued support.

Yours sincerely,


Dr. Anindya Ghosh
Officer-in-Charge
Govt. College of Engineering
& Textile Technology
Berhampore, West Bengal

Officer-in-Charge,
Government College of Engineering & Textile Technology, Berhampore

Government of West Bengal
Department of Science & Technology and Biotechnology (DSTBT)
Vigyan Chetana Bhavan, Block-DD, Plot-26/B,
Sector-I Salt Lake, Kolkata-700064

Application Format for Science Popularization Programme

1. Programme Type (ref SN 11 of the Memorandum): **Workshop organized by College**
2. Title of the proposed Programme: **Waste to Wealth: Agro-Waste-Based Sustainable Product Development for Circular Economy**
3. Target Group (Faculty, Teacher, Research Scholar, School/College/ University Student, Community): **Community, Research Scholar, College Students**
4. Duration (days): **2 days**; Tentative Dates of the proposed Program: **March 10-11, 2026**
5. Aims, Objectives and Details of the Program: **Attached.**
6. Name, Designation, Postal Address, mobile no. and e-mail id of the (only one) Programme Co-ordinator (PC) (attach separate sheet, if necessary):

**Dr. Subhasis Das, HOD, Dept. of Textile Technology,
Address: Govt. College of Engg & Textile Technology, Berhampore.
4, Cantonment Road, Berhampore, Murshidabad, WB- 742101,
E-mail: subhasis.tex@gmail.com, Mob: 9007745104**
7. Legal status of the Institute (School/College/ University/ Institute/ Polytechnic/ ITI/ Autonomous body/ registered NGO/ Trust etc.): **Govt. College**
8. Date wise detail Programme Schedule: **Attached.**
9. Collaborating Institutions/ Organizations, if any, with their specific contribution: **NA**
10. Expected number of participants and list of Resource Persons/ Invited Speakers:
Participants - **50**;
Resource persons: a) **Dr. Santanu Basak, Sr. Scientist, NINFET, Kolkata**
b) **Dr. Saurav Manna, HOD, Mech. Engg Dept., GCETT Berhampore**
c) **Dr. Asish N Banerjee, Jt. Director, Dept. of Textiles, MSME & Textiles**
d) **Dr. Suchibrata Roy, Associate Professor of Textile, GCETT Serampore**
11. Give details of the grant received from DSTBT in last three Financial Years, if any along with the date of submission of UC, Audited SoE, Report etc.: **NA**
12. Name and address of the authority to whom the allotted amount is to be credited (if sanctioned) who will also be responsible for submitting the UC, audited SoE, Programme Completion Report, Feedback, Still and Video photographs etc. of the grant:

**Prof. Anindya Ghosh, Principal-in-Charge, GCETT Berhampore
Govt. College of Engg & Textile Technology, Berhampore.
4, Cantonment Road, Berhampore, Murshidabad, WB- 742101**
13. Total Estimated Expenditure (A)/ Organisation's contribution (B)/ Contribution from any other sources (C) / Grant expected from DSTBT(D):
D : ₹150000.00 = (A: ₹173000 – B: ₹23000. – C: ₹0)
(provide detail Budget break-up as per Annexure-I and Bank details as per Annexure-II):

Check List (put tick) of attachments to be submitted with the application

- Proposed Total Budget with break-up (Annexure-I) and Bank Details (Annexure-II) in Institute/ Organization's letter head: **YES**
- For registered NGO/ Trust, filled in Application Format recommended by the appropriate Recommending Authority, viz., Jt.BDO/ BDO/ SDO/ DM/ Executive Officer- Municipality/ Commissioner-Municipal Corporation as the case may be (where the programme is actually going to be held): **NA**
- For registered NGO/ Trust, attested copies of the registration certificate, latest renewal certificate, Memorandum and Rules & Regulations of the Organization, last three years Audited Statement of Accounts, Annual Reports etc., List of recommended beneficiaries: **NA**

DECLARATION

Certified that the details furnished in the filled in format are correct to the best of our knowledge & belief and that the amount of financial assistance, if sanctioned, will be utilized for the purpose for which it is granted within the time as prescribed by DSTBT. We also undertake to abide by the General Guidelines and Terms & Condition prescribed by DSTBT and provide due coverage to DSTBT during the Programme and publications/ print and electronic media made from the Programme in future. We also declare that within one month after completion of the Programme we shall submit the Utilisation Certificate (UC), Audited Statement of Expenditure (Audited-SoE), Programme Completion Report, Feedbacks from the Participants, still and video photographs etc.

Signature:



Date: 15.12.2025

Signature:



Date: 15.12.2025

Name of Program Coordinator:

Dr. Subhasis Das

Designation: **HOD, Dept. of Textile**
Address: **Govt. College of Engg & Textile Technology, Berhampore.**
4, Cantonment Road, Berhampore,
Murshidabad, WB- 742101

*Dr. Subhasis Das
H.O.D., Dept. of Textile Technology
Govt. College of Engineering & Textile Technology, Berhampore
Govt. of West Bengal*

(Office Seal)

Name of Head of the Institution:

Prof. Anindya Ghosh

Designation: **Principal-in-charge**
Address: **Govt. College of Engg & Textile Technology, Berhampore.**
4, Cantonment Road, Berhampore,
Murshidabad, WB- 742101

*Dr. Anindya Ghosh
Officer-in-charge
Govt. College of Engineering & Textile Technology, Berhampore, West Bengal*

RECOMMENDATION

(only for registered NGO/ Trust)

Certified that the said Organisation is reputed in this field and I/ we recommend the said proposal for getting grant-in-aid from DSTBT, Govt of West Bengal for the benefit of the local College/ University Students/ Community etc.

Signature:

Date:

Name of Recommending Authority:

Designation:

Address:

(Office Seal)

Proposed Total Budget with break-ups**A. Total Estimated Expenditure**

Sl. No.	Items required with justification and rate	Total Expenditure (A) (₹)
1.	Honorarium to Resource Persons/ Experts	20,000
2.	Study materials, Consumables expenses	25,000
3.	Hall rent, if any	-
4.	Publicity materials	10,000
5.	Travel expenses	30,000
6.	T.A. to the external Resource Persons/ Experts	10,000
7.	Documentation expenses including audio-visual	20,000
8.	Light refreshments	50,000
9.	Auditors' fee	8,000
10.	Other expenses, if any (please specify)	--
Grand Total Expenditure (₹):		1,73,000

Please mention:

B. Institution/ Organization Contribution* in ₹ 23,000

C. Contribution from any other sources (with name & Address) in ₹ 0

D. Grant expected from DSTBT (₹) = Rs. 1,50,000 (A Rs. 1,73,000 – B Rs. 23,000)


Dr. Anindya Ghosh
Officer-in-Charge
Govt. College of Engineering
& Textile Technology
Berhampore, West Bengal

Signature of Authorised Personnel with seal

If C= 0

Undertaking: This organization/ institution is not receiving any kind of financial assistance from any other sources

Signature of Authorised Personnel with seal

* At least 10% of the total budget contribution from the Institute/ Organization is desirable

Annexure-II

Bank details of the Applicant Organisation

Name of the Organization	Govt. College of Engg And Textile Tech Berhampore
Bank Account number & name of the Account holder/ Organization	30740902729
Type of Account (Savings or Current A/c)	Savings
Name of the Bank	State Bank of India
Name of the Branch with Branch address	Berhampore Branch 15, Square East Road, Berhampore, Murshidabad, 742101, WB
IFSC of the Branch	SBIN0000034
Mobile Number of the Programme Coordinator/ Head of the Organization	9007745104 / 7585812878
PAN / TAN of the Account holder/ Organization	TAN- CALO01544E

Signature of Authorised Personnel with seal


15/12/2025
Dr. Anindya Ghosh
Officer-in-Charge
Govt. College of Engineering
& Textile Technology
Berhampore, West Bengal

Waste to Wealth: Agro-Waste-Based Sustainable Product Development for Circular Economy

A. Aim of the Workshops

The primary aim of the workshops is to demonstrate the complete value chain transformation of agro-waste into high-value sustainable products, thereby fostering skill development, rural entrepreneurship, and circular economy practices. The workshops will showcase practical, hands-on technologies for converting readily available agricultural residues into fibres, yarns, fabrics, handicrafts, and composite materials.

B. Objectives of the Workshops

1. **To create awareness** about the potential of agro-waste materials such as banana pseudo-stem, water hyacinth, borassus fruit fibres, okra plants, and jute waste as alternative fibre resources.
2. **To train participants** in fibre extraction techniques from different agro-waste sources using both mechanized and chemical methods.
3. **To impart skills** on fibre processing operations—cleaning, softening, carding, and spinning yarn.
4. **To demonstrate fabric development** using agro-waste-based yarns through handloom processes.
5. **To provide exposure** to basic composite manufacturing methods using agro-waste fibres for developing boards, panels, and moulded components.
6. **To promote entrepreneurship** in sustainable and eco-friendly product development suitable for rural and semi-urban regions.
7. **To support circular economy goals** by reducing environmental burden and creating income opportunities through waste-to-wealth approaches.

C. Details of the Workshops

Module 1: Fibre Extraction from Agro-Waste

Materials Covered:

- Banana pseudo-stem
- Water hyacinth
- Borassus (palm) fruit fibres
- Okra plant fibres
- Jute waste / jute stick fibres

Key Demonstrations:

- Retting and mechanical extraction
- Scraping, decortication, and stripping
- Cleaning and drying techniques
- Fibre grading and quality assessment

Learning Outcomes:

Participants will learn how to convert raw agro-waste into usable fibre forms.

Module 2: Chemical Processing and Yarn Development

Key Demonstration:

- Fibre softening and conditioning
- Carding and sliver preparation
- Hand spinning and basic spinning frame use
- Blending techniques with cotton/jute for uniform yarn

Learning Outcomes:

Participants will understand the conversion of extracted fibres into yarns suitable for textiles and handicraft purposes.

Module 3: Fabric Development from Agro-Waste Fibres

Key Demonstration:

- Handloom weaving
- Knitting

Training includes:

- Sample fabrics, mats, tapes, and woven structures

Learning Outcomes:

Participants will experience the process of transforming yarns into textile sheets and fabrics.

Module 4: Colouration of Agro-Waste Fibres

Key Demonstration:

- Dyeing and colouration methods of different fibres

Training Includes:

- Dyeing and finishing

Learning Outcomes:

Participants will develop skills for converting fibres and fabrics into marketable coloured products.

Module 5: Composite Product Development from Agro-Waste Fibres

Key Demonstration:

- Fibre reinforcement preparation
- Resin application
- Compression moulding or hand lay-up
- Gypsum based false-ceiling using agro-waste

- Making panels, boards, and moulded components

Training includes:

- Thermal/sound insulation panels
- Eco-friendly boards
- Craft-based reinforced product structures

Learning Outcomes:

Participants will learn about the industrial potential of agro-waste fibres in false ceiling, wall panels, partition boards, and composite manufacturing.

D. Expected Outcomes of the Workshop

- Skill development of artisans, students, rural youth, and MSME practitioners.
- Creation of new livelihood opportunities based on agro-waste resources.
- Demonstration of a full **waste-to-wealth value chain** from fibre to product.
- Adoption of sustainable and circular economy practices in local communities.
- Development of prototypes for textiles, handicrafts, and composite items.

E. Available Infrastructure

1. Fibre Extractor from agro-waste
2. Retting bath for agro-waste
3. Full set-up for Fibre to Yarn conversion
4. Yarn Twisting machine
5. Looms for fabric development
6. Chemical treatment machines for agro-waste fibres
7. Yarn and Fabric quality testing machines
8. Full set-up for Composite development

PROGRAM SCHEDULE		
TIME	DAY 1	DAY 2
10.00 AM – 11.30 AM	Inauguration	Module 4: Colouration of Agro-Waste Fibres
11.30 AM – 11.45 AM	Tea Break	
11.45 AM – 1.00 PM	Module 1: Fibre Extraction from Agro-Waste	Module 4: Colouration of Agro-Waste Fibres
1.00 PM – 2.00 PM	Lunch	
2.00 PM – 4.00 PM	Module 2: Chemical Processing and Yarn Development	Module 5: Composite Product Development from Agro-Waste Fibres
4.00 PM – 4.15 PM	Tea Break	
4.15 PM – 6.00 PM	Module 3: Fabric Development from Agro-Waste Fibres	Valedictory and Certificate Distribution


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