## ACTION PLAN FOR THE YEAR 2025-26 KEY PERFORMANCE INDICATORS (KPIs) FOR CSB INSTITUTES RESEARCH & DEVELOPMENT INSTITUTES-CSB-CMERTI, LAHDOIGARH

#	Particulars	Targets proposed	Budget proposed	Indicators	Remarks
1	R&D Sector	101 -2023-2020			
A	Research Projects	24			
11	CSB funded projects	21		Number of research projects funded by CSB	Annexure-I
1.1	i. Ongoing	07	84.93	based on the thrust areas and need	(1.1, 1.2 & 1.3)
	ii. Concluded	03	23.78		
	iii. New	11	184.50	_	
1.2	Externally funded projects	03	-	Number of research projects funded by	
	i. Ongoing	00	-	external funding agencies for leveraging	
	ii. Concluded	02	-	laboratory facility and enhance visibility of	
	iii. New	01	-	the institutes at national level besides financial assistance.	
1.3	International Collaborations			Number of international collaborative research projects for exposure and resources sharing with the experts at international level.	
1.4	Consultancy projects			Number of consultancy projects taken-up in PPP modefor quick transfer of technology.	
1.5	Maintenance of germplasm (genotypes/ breeds)	M: 87/02 E: 89/04 OT: 03/09	2.5	Number of breeds/genotypes being maintained including Breeders Stock and P4, which are valuable resource materials for multiplication and for future research programmes.	Annexure-VIII (8.2.1 & 8.2.10)
1.6	Incubates support	01	-	Establishment and maintenance of Incubation centres which would help in supporting / promoting the start-ups / entrepreneurs for effective transfer of technology.	
1.7	Disease / pest management	01	4.0	Constitution of disease / pest monitoring teams (including members from nested units) for forecasting & forewarning and	Annexure-I (1.7)

				suggesting control measures to the	
1.8	Raw Material Bank a. No. of cocoon purchased	50,000 / 2,000	22.50	Revolving cocoon bank fund for procurement of Muga and Eri cocoons and their sale to provide market support to the farmers.	Annexure-VIII (8.2.8)
	b. No. of cocoon supplied	50,000 / 2,000	-		
1.9	Oak tasar silkworm seed	15000	1.00	Oak Tasar DFLs production for supply to	Annexure-VIII
	production (DFLs)			North east and North West states.	(8.2.9)
2	Technology				
2.1	Product	01	1.0	Number of products / formulations / Varieties / breeds/ hybrids developed.	Annexure-II
2.2	Process / Gene sequence	02	0.0	Number of process / techniques developed	
	submitted	and Gene sequence submitted.			
2.3	IPs (Patent / Trademarks / Registrations)	01	2.0	Number of innovations / genetic resources, filed and granted/registered.	
2.4	Commercialization	01	0.0	Number of technologies authorized / licensed for commercialization.	
2.5	Information / Policy/ SOPs/	02	0.0 Information generated, Standard Operating Procedures (SOPs) developed.		
2.6	Machines / Devices / Equipments / IOTs / App	01	0.0	Number of machine/ devices/ equipment's / Apps developed	
2.7	Technology Assessment and Refinement (TAR)	03	0.0	Assessing the effectiveness of existing technologies and refining them to better suit specific needs of the stakeholders.	
3	Publications		8.95		Annexure-III
3.1	Indian Journal of Sericulture	08		Number of manuscripts submitted / published in the in-house journal – IJS.	
3.2	.2 Indian Silk 02 Number of manuscripts submitted / pu in the in-house journal – Indian Silk.		Number of manuscripts submitted / published in the in-house journal – Indian Silk.		
3.3	Sericologia	05		Number of manuscripts submitted / published in the ISC journal – Sericologia.	
3.4	Others (NAAS/IF rated journals/SCI Index Journals)	10		Number of manuscripts submitted / published in the NAAS /IF rated journal.	
3.5	Journals/SCI Index Journals)3.5Other Publications /Publicity37/105			Number of publications Book / Manual Booklet/leaflet/pamphlet	

				Book chapter Video documentary / Success stories Social Media posting (X / FB/ Inst) on technology promotion/ demonstration. Radio/ TV talks	
4	Extension		• •		4 777
4.1	Expansion of host plant area (Ha)	50	2.0	To expand host plant area keeping in view of the raw silk production targets (Sector wise) for the year 2025-26 in association with concerned State Sericulture Departments, and Regional Offices (ROs)	Annexure-IV
4.2	Introduction of new technologies under SS-2				
	i. Awareness	06*	2.0	Creating awareness about the new technologies among the stakeholders and DoS officials. Dissemination of the improved/ proven technologies to reach the targeted raw silk production for the year 2025-26, through Silk Samagra-2.	
	ii. Dissemination of technologies	06*	10.0	Creating awareness about the new technologies among the stakeholders and DoS officials. Dissemination of the improved/ proven technologies to reach the targeted raw silk production for the year 2025-26, through Silk Samagra-2.	
4.3	Extension events (ECPs)			Conducting extension programmes on	Annexure-IV
	i. Awareness Programme	30/1500	3.0	improved and need based technologies to the	(4.1)
	ii. Technology Demonstration	30/750	1.5	stakeholders.	
	iii. Farmers Field Day	15/1500	3.0		
	iv. Krishimela	03/900	6.0		
	v. Workshop	01/100	2.0		
	vi. Field visits	80/1000	4.0		
4.4	Cluster Promotion Programme (CPP)/ Seri Model Village i. No. of dfls brushed	20000 Eri	100.00	Implementation of Seri Model Village for enhancement of Silk and sericulture development.	Annexure-VIII (8.2.6)

		10000 Muga		200 famers will be adopted (100 each for	
	ii. Area expansion (ha)	20 eri		Muga and Eri) with full technological,	
	•	40 muga		technical and market support. The budget	
	iii. Raw silk production	1.6 Eri		proposed is for 1 <sup>st</sup> year and the study will be	
	(MT)	0.10 Muga		taken up in the project mode for 03 years.	
4.5	Technology transfer through	07/07	23.22	Validation trial of Technologies through On	Annexure-IV (4.2)
	OST/FFT	01/01		Station Trials (OSTs) at the nested units	
	001/111			(RSRSs RFCs etc.) and Farmers	
				Field Trials (FFT).	
46	Monitoring of Projects	08	00	Monitoring of Beneficiary orientated projects	
	implemented through SS-2	00	00	implemented by the states under	
	implemented through 55 2			Silk Samagra $-2$ in consultation with the DoSs	
				and Regional Offices ( $ROs$ )	
5	Human Resource Development			and Regional Offices (ROS).	Annexure.V
5	(HRD)				11111CAUI (- V
5.1	PG Diploma in Sericulture			Certificate course in sericulture (Mulberry	
011				and Vanya) for graduates.	
5.2	Structured Programmes for			Structured (routine) programmes organized	
	stakeholders			to enhance the skills among the stakeholders	
	i STEP			to emilance the skins among the statenorders.	
	ii. SRC	120/1200	6.00		
	iii. New SRC	8	32.00		
	iv. Farmers Skill Training	12/300	11.25		
	Programme				
	v. Chawki rearing	2/20	2.20		
	vi. Non-CBT				
	vii. ToP	2/50	1.90		
5.3	Ad-hoc training programmes to			Specialized training programmes planned and	
	Scientist /Staff for improvement			executed for the benefit of the Scientific and	
	of skills			administrative staff for enhancement of skills.	
5.4	Development of curriculum	05		Development of curriculum for the structured	
				training programmes.	
5.5	Guideship	05		Guideship offered / provided for the PG &	
				PhD students	
6	Infrastructure Development				Annexure-VI
6.1	Strengthening of Laboratory	87 (7 labs)	1008.80 (Assets)	Equipping laboratory with state of the art of	Includes nested
			1634.25 (CEVA)	scientific equipment's.	units
6.2	Strengthening infrastructure at			Strengthening of infrastructure at Nested	

	nested units			Units	
6.3	Accreditation of Laboratories			Accreditation of laboratories from	
				National and international agencies / bodies.	
6.4	E-Governance Implementation	100%		Digitalization of official activities, up-dation	
	(%)			of office website on periodical basis and up-	
	i. eHRMS			dation of soft skills through iGoT Karmayogi.	
	ii. CSB MIS				
	iii. iGoT Karmayogi				
	iv. linking with KPIs				
	v. up-dation of				
	institute website				
7	Revenue Generation			Generated through Royalty, Licensing	Annexure-VII
				technology, sale of cocoon / DFLs/ silk/	
				seedlings and other services etc., Externally	
				funded and consultancy project	
7.1	Revenue	35.00			
8	Others, if any.	16	274.40	Other Miscellaneous activities at main	Annexure-VIII
				Institute and Nested units.	

## 1. CSB funded Research projects

1.1. Ongoing projects during the year 2025-2026

	(Rs. Lak										
Sl. No	Code	Title	Start	End	Milestones to be crossed	Progress to be achieved	Budget allocated				
At r	nain ins	titute									
1.	ARP 5023 CN	Muga and Eri silkworm disease monitoring and management in northeastern states of India.	Mar., 2023	Feb., 2028	Visit to seed farms and monitoring diseases and suggestion of remedial measures. Preparation of reports and data analysis. Analysis of complete data collected in the year and submission.	Reduce disease incidence due to stringent monitoring in muga and eri ecosystem.	4.00				
2.	PIB 5025 SIC	CharacterizationandevaluationofSoalu(Litseamonopetala)accessionsformugasilkworm(Antheraeaassamensis)rearing.	Feb., 2024	Jan., 2027	Maintenance of existing 22 Saolu accessions plantation. Bioassay study (Muga rearing, Jethua and kotia crop). Recording of morpho-metric trait and biochemical traits data of existing host plant accessions of Soalu	Maintenance of existing 22 Saolu accessions plantation. Bioassay study (Muga rearing, Jethua and kotia crop). Recording of morpho-metric trait and biochemical traits data of existing host plant accessions of Soalu	4.10				
3.	SPR 5026 SIC	Development of suitable Muga and Eri based Integrated Farming System (IFS) for North East India	Feb., 2024	Jul., 2026	Introducing additional IFS models at farmers' level in Nagaland, Meghalaya, Assam, etc. and supply of required inputs, raw materials, provide training to adopted farmers and monitoring of the IFS activities. Recording yield and economics of different components of IFS per unit area at selected farmers, institute level and conventional cropping system and interim data analysis	At least 3/4 additional models of IFS will be studied atNagaland, Meghalaya, Assam, etc. and providerequired inputs, raw materials, training to adopted farmers. Generate information about the yield and economics of muga/eri based IFS and compared with the yield and economics of conventional methods	15.30				

Annexure-I

4. 5.	PIT 05029 SNC SRE 05031 SNC	Development of clonal propagation methods in Borpat ( <i>Ailanthus grandis</i> L.) for its mass multiplication Info chemicals mediated multifarious behavioural tactics for Uzi fly management in Muga culture	Mar., 2024 Mar., 2025	Feb., 2027 Feb., 2028	MaintenanceofexistingBorpatplantation.IdentificationandoptimisationofVegetative propagationmethods.Tissue culture using explantsin laboratory and hardening of saplingsif developedTo evaluate the efficacy of insect origininfochemicals against Uzi flyTo evaluate the efficacy of Muga hostplants volatiles and synthetic ChemicalsTo study the bioprospecting for theinfochemicals from various flowering	Identification and optimisation of Vegetative propagation methods. Tissue culture using explants in laboratory and hardening of saplings if developed Infochemical profile data from various sources eliciting a response in Uzi fly. Insights into Uzi fly's differential reaction to extracts from larval body parts, frass, plant extracts, and	10.32 37.04
					To assess the effectiveness of infochemicals against Uzi fly	Identification of attractants, repellents, and ovipositional deterrents. Development of a cost- effective, eco-friendly trapping device to control Uzi fly, benefitting Muga farmers by reducing crop losses.	
At n	ested un	its					
6.	SPR 05032 SIC	Development of Oak tasar rearing technology in Early Spring and Late Autumn crop	Mar., 2025	Feb., 2028	To develop a suitable rearing technology for early spring crop to avoid dfls wastage and establish a seed linkage with North West India. To develop a suitable rearing technology for autumn crop to compensate the loss of seed cocoons due to erratic emergence and pupal mortality during prolonged preservation.	Early spring-rearing technology will prevent dfls wastage due to non- synchronization with leaf sprouting. Autumn crop technology will compensate for seed cocoons loss due to erratic emergence and pupal mortality during prolonged preservation. Developed host plant management, early spring and autumn crop technology will enhance cocoon production, support seed linkage between North East and North West India, and improve farmer income.	8.85

7.	SIB	Isolation of shorter larval	Mar.,	Feb.,	Selection of inbreed line with shorter	On completion of the project a Short	5.50
	0503	duration line of Oak Tasar	2025	2029	larval duration from the mass population	Larval Duration (SLD) line will be	
	3	silkworm - A. proylei through			of A. proylei.	isolated and which can reduce at	
	SIC	selection from the mass				least 10 days of larval period from	
		population				general population of A. proylei.	
		<b>^</b>				It will reduce the larval mortality,	
						leaf consumption as well as the	
						mandays to the tune of about 30	
						mandays for rearing of 400 dfls in	
						one Acre of oak plantation by the	
						oak rearers.	
						Further, rearing capacity per acre	
						will be increased to 450 to 500 dfls	
						thereby increase cocoon production	
						by about 12-16 %.	
						The newly isolated SLD line will	
						facilitate their systematic utilization	
						in future Oak Tasar breeding	
						programme.	
					Total		84.93

## **1.2. Projects to be concluded during the year 2025-2026**

Sl.	Code	Title	Start	End	Progress output	Utility of out-put/ Impact on silk	Budget
						industry	allocation
At n	nain insti	tute					
1.	MOE 5027 SIC	Economic analysis of Tapioca based Ericulture in Assam & Nagaland	Feb., 2024	Jul., 2025	Tapioca sowing for the second year and continue rearing of the first year plantation. And tuber yiled will be recorded in the farmers as well as institute farm. Collection of the rearing as well as leaf harvest, interval and tuber yield accordingly analysis of the data. Cost of economics of tapioca with comparison with other host plants	Complete the sowing of tapioca for the second year and ensure successful rearing on the first-year plantations. Record tuber yields from farmers' fields and the institute's farm for detailed analysis. Finalize data collection on rearing performance, leaf harvest percentages, harvest intervals, and tuber yield. Conduct a thorough analysis of the collected data to evaluate trends and outcomes. Conclude the cost-economic comparison of tapioca with other host plants to determine its viability and efficiency. Prepare the final report	3.20
2.	AIT 5024 EF	Advanced level Institutional Biotech Hubs at Central Muga Eri Research and Training Institute, Jorhat, Assam (Phase-II) (DBT Funded Project)	Mar., 2023	Feb., 2026	Identification of causal genes for larval phenotypes and cocoon phenotypes through linkage mapping. Different ecoraces produce different kinds of cocoons (variations in Shell Ratio, cocoon color, etc.), these phenotypes can be mapped to specific genetic loci/locus on the genome. The GBS efforts in eri ecoraces and strains help us in knowing if these are genetically different. The generated information will be useful in basic biology studies.	The repertoire of SNPs will be useful in DNA marker assisted breeding program to develop high yielding breeds. The generated information will be useful in basic biology studies.	0.00*

3. At no	MOE 5030 SNC ested uni	Evaluation, optimization & Popularization of Ericulture Practices in Castor Growing Areas of Gujarat	Mar., 2024	Feb., 2026	Creation of Chawki and late age rearing facility would enable demonstration of technologies on eri silkworm rearing to castor farmers. Onsite training and demonstration of technologies strengthened the castor farmers and improve their skills in silkworm rearing. Promotion of eri rearing can attracts the farmers and and improve their skills in eri silkworm rearing. Additional income generation for the farmers without affecting the castor seed yield.	Large scale popularization of proven rearing practices with castor farmers for increasing income and silk production in the State and India by utilizing the scheme support to farmers under SILK SAMAGRA scheme. Involvement of local agricultural / State agencies in large scale popularization of eri culture in castor through demonstrations/trainings.	15.00
4.	SPR 05028 SIC	Popularization of Improved Technologies of Muga Culture for Enhancing Cocoon Production in Manipur	Feb., 2024	Jan., 2026	Selection of lead Muga farmers has been completed in coordination with DOS Manipur. They were sensitized with different improved technologies of Mugaculture. Benchmark survey of farmers has been completed. Training programme, Technology demonstration programme on application of disinfectants, pruning techniques was conducted in coordination with DOS Manipur. Conducted technology awareness programme of Mugaculture. Disinfectants such as slaked lime, bleaching powder, sodium hypochlorite, pruning devices has been distributed to the farmers to use in farm activities and silkworm rearing.	To enhance production and productivity of muga silk, development of socio-economic status of mugafarmer's in Manipur by adopting improved technologies of Muga culture.	8.78

5.	APS 05021 EF	Studies on population diversity and role of host plant volatiles cues for enhancing egg laying in temperate tasar silk moth ( <i>Antheraea proylei</i> ) (DBT funded project)	Jan., 2022	Dec., 2024 (Extend ed upto Mar., 2025; Sept., 2025)	Total seventeen chemicals were test- verified and identified four most effective chemicals which can enhance egg laying in oak tasar silk moth. Test verification of these 04 identified chemical cues will be carried out.	The developed technology will be directly involved in increasing egg production and will be adopted by the oak tasar seed sector for the overall silk production.	0.00*
					Total		23.78

\*External Funded project

#### 1.3. New projects to be initiated during the year 2025-2026

SI	Code	Title	Start	Fnd	Objectives	Expected output	Budget
51	Cout	The	Start	Linu	Objectives	Expected output	allocated
	•						anocateu
At maii	n institu	te					
1.	PIN 05034 SIC	Collection, Screening, and Evaluation of Nitrogen Use Efficiency in Kesseru ( <i>Heteropanax fragrans</i> Seem) for Climate Smart Eri culture	Apr., 2025	Mar., 2028	Collection of Kesseru accessions for the enrichment of the germplasm Screening and evaluation of existing Kesseru germplasm for Nitrogen Use Efficiency to promote ericulture as a sustainable agroindustry	Enrich the existing germplasm of Kesseru with an increased number of accessions. Identification of Kesseru plants with better NUE will not only provide higher leaf biomass for rearing under lower N supply but also will generally have a higher leaf protein content due to the improved N status of the plant. The optimization of N-use by the plant is anticipated to decrease reliance on nitrogen fertilizer, thus reducing its environmental impact. This reduces emissions of GHGs (greenhouse gases) from fields and will also contribute to achieving nearly five UN Sustainable	17.50

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2.	SRP	Deciphering Virulent and	Apr.,	Mar.,	1.	To isolate and characterize	The identification and	29.75
	05036	Avirulent Strains of Nosema	2025	2028		different strains of Nosema	characterization of highly virulent	
	MIC	infecting Muga Silkworms				assamensis from infected Muga	Nosema strains affecting Muga	
						silkworms.	silkworms will help distinguish	
					2.	To assess the virulence of	them from less pathogenic strains.	
						identified Nosema assamensis	This will provide valuable insights	
						strains through controlled	into the pathogenic mechanisms,	
						experimental infections in Muga	including infection mode,	
						silkworms.	replication dynamics, and host	
					3.	To gain comprehensive	impact.	
						understanding of the virulence-	With this knowledge, tailored	
						related genes and the associated	management strategies can be	
						pathways in virulent and avirulent	developed to control the spread of	
						strains of Nosema assamensis.	virulent strains effectively	
							reducing the reliance on broad-	
							spectrum pesticides or antibiotics	
3	CSB/C	Evaluation of role of	2025	2028	1	To standardize the effective dose of	The problem of inadequate seed	0.00*
5.	MER/R	polyamines: spermidine and	2025	2020	1.	various polyamines that enhances	supply will be addressed if the	0.00
	CN-179	spermine in enhancement of				egg production of muga and eri	enhancement of fecundity ratio by	
	Approved	fecundity and egg production				silkworms	polyamines in muga and eri	
	BAC	of muga (Anthongog			2	To understand the machanism by	silkuorma proved et leb seele end is	
	KAC &	of filluga (Antherded			۷.	10 understand the mechanism by	shkwonins proved at lab scale and is	
	TEC of	ussumensis) and en (samua				from dity and any modulation of	tested at farm level. The new	
	DBT	<i>ricini)</i> siikworms.				recurdity and egg production of	method developed in the project	
					2	muga and eri silkworms.	will be given to seed production	
		(DBT Funded in Collaboration			3.	Field trials with selected	centres for testing.	
		with GITAM, AP)				concentrations of polyamine.	Identification of genes involved in	
							testicular development that help in	
		Fund release from DBT is					enhancement of fertility.	
		expected in May 2025					Enhancement of sperm count,	
							sperm maturity, sperm motility,	
							fertilization, number of eggs	
							produced and fertility ratio through	
							application of polyamines.	
							Enhancement of farm level muga	
							and eri egg production.	

l. PP- 00224	Integrating Muga Silk heritage with Sustainable Organic Tea Cultivation	2025	2028 1. To establish standardized methods for integrating organic tea cultivation with Muga silkworm rearing	It is expected that the chemical usage for tea cultivation will reduce ensuring the harmonious coexistence and prosperity of muga and tea heritage industries. Preservation of the Muga silk heritage in synergy with tea cultivation will improve the livelihood of local communities and increase cultural pride.	10.20
5. PP- 00226	Collection, screening and identification of water logging tolerant castor ( <i>Ricinus</i> <i>communis</i> ) genotype for climate resilient Ericulture	2025	<ul> <li>2027 1. Exploration, collection and characterization of diverse casto germplasm for Ericulture</li> <li>2. Standardization, screening and evaluation of castor germplasm for water logging tolerance</li> <li>3. Genome wide association mapping to identification of marker trait association for water logging tolerance and leaf yield attributes</li> </ul>	Enrich the germplasm resources of castor with an increased accession number at CSB-CMER&TI, Jorhat, which will serve as germplasm conservation bank/repository for castor in North-eastern India. Passport data will be generated for all the diverse castor germplasm collected. A comprehensive descriptor catalogue of castor germplasm for Ericulture will be developed. Promising castor germplasm with high leaf yield attributes suitable to Northeast conditions for Ericulture will be identified. The promising castor germplasm with high leaf yield and other good quality parameters can be expected to serve as parental material in future breeding programs for developing the superior castor hybrid or variety Castor germplasm with waterlogging tolerance suitable to Northeast conditions will be identified. The identified	17.62

						germplasm can serve as a donor/parent for future breeding programs. The genes or loci governing the expression of waterlogging tolerance and leaf yield attributes are expected to be identified. Identified superior germplasms (3- 4 No.) for desired traits can be registered at NBPGR, New Delhi and SCI publications (3-4 No.)	
6.	CNID 00199	Development of smart portable analyzer for muga silk purity and dye origin assessment in dyed fabrics	2025	2028	<ol> <li>Systematic collection of dyed fabric sample &amp; their comprehensive characterization (Purity, types &amp; composition of dyes/variants, dyeing attributes, IR spectroscopy) for data generation.</li> <li>Systematic collection &amp; characterization of physico-chemical properties of Muga and Tassae silk fibers, to assess their structural, mechanical, thermal spectroscopic properties for data generation.</li> <li>Design optimization &amp; development of a spectroscopy based optical metrology system and an IoT- enabled device suitable for real time Identification of silk purity and dye types.</li> </ol>	Firstly, the development of a reliable Muga silk purity detection prototype will empower artisans, traders, and consumers to authenticate Muga silk, reducing the prevalence of adulterated products and safeguarding the reputation of genuine Muga silk. This will increase consumer confidence and contribute to maintaining the integrity of the Muga silk market. Secondly, the creation of a tool to accurately differentiate between natural and synthetic dyes will foster the use of eco-friendly dyes in the textile industry. This will enable manufacturers, retailers, and consumers to make informed, sustainable choices, supporting the global shift towards sustainable fashion. The project also aims to preserve cultural heritage by providing a means to authenticate traditional Muga silk and natural dyeing	26.00

						techniques. By protecting these practices, the project will ensure the continued vitality of Assam's textile heritage and promote the value of traditional crafts in a modern context.	
7.	CNID 00221	Harnessing Nanotechnology for Enhancing Systemic Defense in Eri and Muga Silkworms Against Major Pathogens	2025	2028	<ol> <li>To evaluate the efficacy of nanoparticles in inducing systemic defense in eri and muga silkworms against major pathogens.</li> <li>To study the transcriptomic and metabolomic changes associated with nanoparticle application in silkworms.</li> <li>To identify key genes and pathways involved in nanoparticles-mediated defense responses using gene expression analysis.</li> </ol>	Identification of effective nanoparticles for systemic defense induction in eri and muga silkworms. Comprehensive transcriptomic and metabolomic profiles associated with nanoparticle-mediated immunity. Key genes and pathways involved in enhancing pathogen resistance. A potential framework for integrating nanotechnology in sericulture disease management.	17.05
8.	CNID 00220	Elucidating the Role of Probiotics: Enhancing Eri Silkworm ( <i>Samia ricini</i> Donovan) Health & Silk Yield	2025	2028	<ol> <li>To evaluate the effect of probiotic bacteria on the larval growth parameters.</li> <li>To assess the quality of silk fiber and economic yield of eri silkworm.</li> <li>To assess the influence of probiotics on the silkworm gut flora.</li> </ol>	<ul> <li>Probiotics hinder the growth of these pathogens, fortifying the silkworm's immune system and reducing the risk of disease outbreaks. The application of probiotics is eco-friendly for the management of silkworm diseases rather than the use of chemicals and antibiotics, which is widely used in the sericulture industry. The expected outcome and utilization of the present investigation are given below:</li> <li>Production of quality and quantity of silk yarn meet the requirement of textile industry to make good quality eri fabric</li> <li>Distribution of probiotic treated eri seeds to the farmers</li> </ul>	15.77

						<ul> <li>throughout the year for rearing and gain additional income</li> <li>Commercialization of probiotic besterie engeight for rearing of</li> </ul>	
						eri silkworm to boost up the immune system	
9.	CNID 00222	Assessment of Phytoremediation Potential of Castor ( <i>Ricinus communis</i> ) in Heavy Metals Contaminated Soils of Assam for Environmental Reclamation Through Ericulture	2025	2028	<ol> <li>Survey, collection and analysis of soil samples from major crude oil contaminated sites in Assam.</li> <li>Screening and evaluation of castor growth, development and leaf quality in crude oil contaminated soil</li> <li>Bioassay analysis of eri silkworm, nutritional profiling of pupae, and quality assessment of eri silk</li> </ol>	<ul> <li>Identification of the extent and nature of heavy metal contaminated soils across major sites in Assam.</li> <li>Development of a database on soil physicochemical properties and heavy metal concentrations to assess environmental risks.</li> <li>Determination of castor's phytoremediation efficiency through heavy metal uptake and translocation studies.</li> <li>Nutritional profiling of eri silkworm pupae to evaluate the safety and quality for potential commercial applications.</li> <li>Quality analysis of eri silk produced from silkworms reared on phytoremediated castor, ensuring its commercial viability.</li> <li>Establishment of an integrated approach for environmental reclamation by utilizing castor for phytoremediation and eri silkworm rearing for sustainable economic benefits.</li> <li>Development of eco-friendly strategies to rehabilitate degraded lands and promotes sustainable</li> </ul>	14.06
			1	1		ericulture in Assam.	

At nested units								
10.	MPC 05035 MIC	Development of mobile based application for organized Muga seed sector	Apr., 2025	Mar., 2026	<ol> <li>Identification and mapping of the muga seed cocoon production areas. To prepare database of the muga seed cocoon producers.</li> <li>To develop an android mobile application for tracing the Muga seed cocoon producers</li> </ol>	Numbers of Adopted Seed Rearer/Adopted Graineurs can be increased. Muga silkworm seed availability can be ascertained. Monitoring of P2 and P1 production units will be easier. Easy traces of the seed cocoon rearers and the location Easy monitoring of the transaction of the mugaseed cocoons. Information on reason for crop failure.	14.20	
11.	MOE 05037 MIC	Popularization of improved technologies of muga culture for elevation of seed cocoon production in Garo Hills districts of Meghalaya	Apr., 2025	Mar., 2027	To popularize the muga rearing technologies among the tribal rearers of Garo Hills Districts of Meghalaya. To improve the socio-economic status of the population by enhancing seed cocoon production through adoption of improved muga rearing technologies.	Adoption of muga rearing and host plant management technology will lead to higher cocoon yield and higher income to the farmers. Adoption of technology related to grainage and post cocoon activities will also increase farmers' income and will help in value addition. Training and extension communication programme will impart technical knowledge to the farmers. Will provide information about Socio-economic condition of the farmers before and after implementation of the project. It will give the information of income generation and cocoon productivity before and after implementation of the project. It will provide information regarding efficacy of technologies in project area and need of technology refinement if any.	10.0	

12.	CNID 00179	Technology Intervention for Enhancing Production and Productivity of Oak Tasar Cocoons in Assam, Mizoram	2025	2028	To enhance cocoon production of Oak Tasar in Assam, Mizoram and Nagaland through technology intervention.	This study will help to develop production and productivity of Oak tasar cocoon in Assam, Mizoram and Nagaland through technology	12.35
		and Nagaland				intervention.	
					Total		184.50

\*External funding

1.3.1.	Ongoing projects during the year 2025-2026 (as a CoI) -Nil	
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1.3.2. Projects to be concluded during the year 2025-2026 (as a CoI)

Sl.	Code	Title	Start	End	Progress output	Utility of out-put/ Impact on	Budget
No						silk industry	allocation
At n	nain institu	ite					
1.	SRP	Development of a Rapid	Feb.,	Jan.,	Testing and validation of the Rapid	Quick and efficient diagnosis of	1.75
	8012	Antigen Test Kit for	2024	2026	Antigen test Kit for Diagnosis of	the Cytoplasmic Polyhedrosis in	
	MNC	Diagnosis of Cytoplasmic			Cytoplasmic Polyhedrosis in Vanya	Vanya Silkworms will aid in	
		Polyhedrosis in Vanya			Silkworms (Antheraea assamensis, A.	timely implementation of control	
		Silkworms (Antheraea			mylitta and A. proylei)	measures to save crop loss. This	
		assamensis, A. mylitta and				will have positively impact the	
		A. proylei				Vanya silk Industry.	
2.	BPS	Optimization of preservation	Aug.,	Feb.,	Gather initial consumer insights	Preserved Silkworm Pupae:	2.55
	01045	techniques and quality	2024	2026	regarding demand and acceptance of	Optimized preservation methods	
	MNC	assessment of mulberry and			silkworm pupae.	will result in high-quality, long-	
		eri pupae for human			Establish baseline quality metrics for	lasting preserved silkworm	
		consumption			fresh silkworm pupae.	pupae, suitable for	
					Monitor the consumer preferences and	commercialization as a food	
					acceptance level.	product.	
					Evaluate consumer sensory preferences	Standardized Preservation	
					and acceptance of preserved pupae.	Techniques: Development of	
						effective preservation methods	
						such as drying, freezing, or	
						pickling, ensuring the retention of	
						nutritional content, texture, and	
						sensory attributes.	

				Quality Assessment Protocols:	
				Establishment of comprehensive	
				evaluation procedures to	
				consistently assess the quality	
				and safety of preserved pupae.	
3.			Total		4.3

## 1.3.3. New projects to be initiated during the year 2025-2026(As a CoI)

Sl.No	Code	Title	Start	End	Objectives	Expected output	Budget
							allocation
At mai	n institu	ite					
1	DBT	Exploration of	2028	2028	Isolation and characterization of	Volatile profile of pheromones from <i>E</i> .	0.00*
	Ref.	pheromones and			pheromones and kairomones.	Sorbillans and X. Predator and	
	NO.: BT/	kairomones for the			Assessing the	kairomones profile from tasar and muga	
	PR470	management of parasitic			electrophysiological and	silkworms.	
	O97/	pests of vanya silkworms.			behavioral assay.	Identification of pheromone and	
	NER/				Assessing the efficacy of the	kairomone compounds eliciting the	
	95/ 1072/				semiochemicals.	behavioral response against target pests.	
	2023					Field efficacy of pheromone/kairomone	
						blends and possibility of their	
						commercialization.	

\*External funded project

## Annexure-II

Annexure-III

#### 2. Technology

#	Item	r	Farget
		Physical (No)	Budget proposed
2.1	Product	01	1.0
2.2	Process / Gene sequence submitted	02	
2.3	IPs (Patent / Trademarks / Registrations)	01	2.0
2.4	Commercialization	01	
2.5	Information / Policy/ SOPs/	02	
2.6	Machines / Devices / Equipments / IOTs / App	01	
2.7	Technology Assessment and Refinement (TAR)	03	
	Total	11	3.0

#### 3. Publications

Sl. No.	Item		Target (No.)
		Physical (No)	Budget allocation (Rs. In lakhs)
3.1	Publications		
3.1.1	Indian Journal of Sericulture	08	
3.1.2	Indian Silk	02	
3.1.3	Sericologia	05	
3.1.4	Others (NAAS/IF rated journals/SCI Index Journals)	10	
3.1.5	Other Publications /Publicity	37/105	
	Total		8.95

# 4. Extension Communications Programmes- 2025-2026

Sl. No	Programmes			Target	
		(Rs. In Lakhs)	No of programmes	No of stakeholders	Budget Proposed
4.1	Resham Krishi Mela	3.0/1.50	3	900	6.0
4.2	Farmers Field Day	0.20	15	1500	3.0
4.3	Awareness programme	0.10	30	1500	3.0
4.4	Technology demonstration / Enlightenment programmes	0.05	30	750	1.5
4.5	Workshop/ Seminars & Conferences [SEEM] National conference on Sericulture in 21 <sup>st</sup> Century – opportunity and challenges (Institute)	2.0	1	100	2.0
4.6	Other activities (field visits)		80	1000	4.0
	Total		159	5750	19.5

#### 4.1. Extension Communications Programmes- 2025-2026

#	Programme		Target		
		Unit cost (Rs. Lakh)	No of	No of stakeholders	<b>Budget allocation</b>
			programmes		(Rs. In lakhs)
Ι	Workshop/ seminar				
1	CMER&TI, Lahdoigarh	2.00	1	100	2.0
	Sub-total	2.00	1	100	2.0
II	Organization of Krishimela #				
1	CMER&TI, Lahdoigarh	3.00	1	500	3.0
2	RSRS, Boko	1.50	1	200	1.5
3	RSRS, Imphal	1.50	1	200	1.5
	Sub-total	-	3	900	6.0
III	Awareness Programme				
1	CMER&TI, Lahdoigarh	0.10	7	350	0.7
2	RMRS, Boko	0.10	5	250	0.5
3	RSRS, Imphal	0.10	5	250	0.5
4	REC, Lakhimpur	0.10	4	200	0.4

#	Programme		Target		
		Unit cost (Rs. Lakh)	No of	No of stakeholders	<b>Budget allocation</b>
			programmes		(Rs. In lakhs)
5	REC, Fatehpur	0.10	4	200	0.4
6	REC, Sille	0.10	3	150	0.3
7	REC, Coochbehar	0.10	2	100	0.2
	Sub-total	0.10	30	1500	3.0
IV	Farmers Field day				
1	CMER&TI, Lahdoigarh	0.2	7	700	1.4
2	RMRS, Boko	0.2	3	300	0.6
3	RSRS, Imphal	0.2	2	200	0.4
4	REC, Lakhimpur	0.2	3	300	0.6
	Sub-total	0.2	15	1500	3.0
V	Technology Demonstration				
1	CMER&TI, Lahdoigarh	0.05	7	175	0.35
2	RMRS, Boko	0.05	5	125	0.25
3	RSRS, Imphal	0.05	5	125	0.25
4	REC, Lakhimpur	0.05	4	100	0.2
5	REC, Fatehpur	0.05	4	100	0.2
6	REC, Silly	0.05	3	75	0.15
7	REC, Coochbehar	0.05	2	50	0.1
	Sub-total	0.05	30	750	1.5
VI	Field Visits		80	1000	4.00*
	Grand Total	-	159	5750	19.5

\*TA/DA expanses

## Annexure-IV (4.2)

## 4.2 Technology Transfer through OST/FFT -2025 -2026

4.2.1 On Station Trials (for validation of technology at CSB institutes/ RSRSs/ DoS units etc.)

								(Rs. Lakhs)
Sl.	Name of the Technology	Unit Cost	At CSB	RSRSs	DOS Unita	Total	Anticipated impact	Budget
INU		(KS. Läkii)	mstitutes		Units			allocation
1.	Multi-location trials of Eri breeds/crossbreeds	0.15	01	-	09	10	New eri breeds/cross breeds as per HAC norms	1.50
2.	Rearing management of Muga silkworm in cooler region during summer	0.20	01	05	-	06	Identification of new areas for summer rearing of muga silkworms.	1.20
3.	Validation of NaOCl and Nirmool for egg disinfection to reduce pebrine spread.	0.10	02	02	-	04	Reduction in Pebrine incidence and its impact on silkworms.	0.40
4.	Validation of Pebrine detection through mobile/web base App.	0.10	02	03	-	05	Quick and easy method for identification of Pebrine spores in diseased silkworms.	0.50
5.	Validation trial of NBR-4 (Acc. 22) of castor.	0.50	01	02	0	03	20% enhancement in leaf yield and significant improvement in yield attributing traits as against local check (NBR-1) The Acc.22 is identified as superior accession under the project PIB05005SI. The validation of its superiority will aid in recommending this accession for commercial cultivation.	1.50
6.	Popularization of thermo-tolerant Oak Tasar breed C27-T	0.06	0	02	03	05	Enhanced survivability %age during summer season	0.30
7.	Popularization of Eri C2 breed and Borduar eco-race in Manipur	0.08	-	02	03	05	10-15 % increase in ERR as against Manipur local	0.40
	·	•	•	•	Total	38		05.80

4.2.2.	On Farm	Trials (for	• demonstration	of Technologies a	t farmers' level)
			wennes in whether a		<i>juliii i i i i i i i i i</i>

Sl.	Name of the Technology	Unit	No. of	No. of	Anticipated impact	Budget
No		Cost	locations	stakeholders		allocation
		( <b>Rs.</b> )				
1.	Popularization of Kesseru Eri host	2,210	04	200	Popularization of superior host plants of	
	plantHF005 and HF008		(Assam,		muga and eri silkworms will augment	4.42
	Popularization of Borpat Eri host plant		Nagaland,		quality leaf production in the field leading	
	Popularization of other muga and eri host		Arunachal		to enhanced cocoon production per unit	
	plants		Pradesh &		area.	
			Mizoram)			
2.	Popularization of Formulation for Muga cocoon	5,00	10	200	Improved cocoon cooking and reeling	1.0
	cooking (Muga Super Cook)				performance in Muga cocoons.	
3.	Validation of cold reeling technology	10,000	05	10	Improved seed availability along with silk	1.0
					yarn extraction.	
4.	Trials of formulated volatiles application for	10,000	05	05	Enhanced egg laying capacity of muga silk	0.5
	enhancing egg laying capacity of muga silk				moth during commercial crop	
	moth during commercial crop.					
5.	Trials of formulated volatiles application for	10,000	05	05	Enhanced egg laying capacity of eri silk	0.5
	enhancing egg laying capacity of eri silk moth				moth during commercial crop	
	during commercial crop.					
6.	Improved platform rearing technology in	1,00,000	05	05	For promoting large-scale rearing	5.00
_	Ericulture					
7.	Promotion of plastic mountages in ericulture	25,000	10	20	To reduce the labour intensive traditional	5.00
					mounting system in eri and to increase the	
					silk quality.	
1		Total	44	445		17.42

## Annexure-V

#### 5. Human Resources Development – 2025-2026

#	Human Resource Development (HRD)	No of events / stakeholders	Budget proposed (Rs in Lakhs)
5.1.	i. SRC (existing)	120/1200	6.00
	ii. New SRC	8	32.00
	iii. Farmers Skill Training Programme	12/300	11.25
	iv. Chawki rearing	2/20	2.20
	v. Non-CBT		-
	vi. ToP	2/50	1.90
	Total	136/1570	53.35
			•

5.2 Unit wise	e breakup details of Human Resources Development – 2025-2026				( <b>R</b> s. in Lakhs)	
Sl. No.	Title of the training programme	Unit cost	Target			
		( <b>R</b> s)	No. of programmes	No of stake	Budget proposed	
				holders		
5.2	Farmers Skill Training (FST)					
5.2.1	CSB-CMER&TI, Jorhat	3750	4	100	3.7500	
5.2.2	RSRS, Boko	3750	2	50	1.8750	
5.2.3	RSRS, Imphal	3750	1	25	0.9375	
5.2.4	REC Lakhimpur	3750	2	50	1.8750	
5.2.5	REC, Fatehpur	3750	2	50	1.8750	
5.2.6	REC, Sille	3750	1	25	0.9375	
	Sub-tota	d 3750	11	300	11.25	
5.3	<b>Technology Orientation Programme (TOP)</b>					
5.3.1	CSB-CMER&TI, Jorhat	3800	1	10	0.38	
5.3.2	RSRS, Boko	3800	1	10	0.38	
5.3.3	RSRS, Imphal	3800	1	10	0.38	
5.3.4	REC Lakhimpur	3800	1	10	0.38	
5.3.5	REC, Fatehpur	3800	1	10	0.38	
5.3.6	REC, Sille*	-	-	-	-	
5.3.7	REC, Coochbehar*	-	-	-	-	
	Sub-total	3800	5	50	1.90	
5.4	Hands on training on Chawki rearing (10 days)	1100		• •		
5.4.1	CMERTI. Lahdoigarh	1100	2	20	2.20	

Sl. No.	Title of the training programme	Unit cost		Target	
		( <b>R</b> s)	No. of programmes	No of stake	Budget proposed
				holders	
5.5	Training under Sericulture Resource Centres (SRCs) <sup>#</sup>	75000/SRC		1200	6.00
5.6	Establishment of New SRC	4.0	8		32.00
	G. Total	-		1570	53.35

\*No Scientific staff available in the unit

# Updated Action Plan of CBT will be communicated separately

Annexure-VI

## 6. Infrastructure Development

## Procurement of equipment and other accessories proposed for the year 2025-2026

Budget Proposed under Asset creation head as per BE 2025-2026: Rs. 640.34 Lakh (556.0 for Civil Deposits & 84.34 for Asset Creation) Total Budget requirement is Updated to Rs. 2643.05 Lakh (Including establishment of CEVA)

#	Items/	Justification	Targ	get
	equipment/ other accessories		Physical (No)	Budget allocated
				(Lakhs)
6.1	Cooling centrifuge machine	The requested machine is essential for the isolation of RNA, which	01	5.00
		is a fundamental step in various biotechnology-related tasks		
		conducted in our lab.		
6.2	White Sample Tray for Gel Doc system	The equipment is necessary to record and analyze the results of gel	01	1.20
		electrophoresis, which is a critical technique in molecular biology		
		experiments.		
6.3	Insect growth chamber	For laboratory insect culture maintenance as study requires to lot of	01	5.00
		target insect cultures for bioassay studies.		
6.4	Headspace sampler (volatile collection	To collect the volatiles from different sources as study mainly based	01	5.00
	system)	on the infochemical compounds.		
6.5	4-Choice (Four-Arm) Arena Olfactometer	To carry out the behavioural assay of identified infochemical	01	5.00
	with Air delivery system	compounds.		
6.6	Wind tunnels	To conduct behavioural assay of infochemicals from different	01	5.00
		sources.		
6.7	-20 °C / -80 °C Deep Freezer with Inverter	-20 °C / -80 °C deep freezer is required for preservation of volatile	01	3.00
	_	organic compounds and other temperature sensitive chemicals.		
6.8	Dry bath incubator	To sterilize infochemical collecting traps.	01	1.00
6.9	Nanodrop spectrophotometer	Required for proposed project to measure the concentration of	01	7.00

#	Items/	Justification	Target	
	equipment/ other accessories		Physical (No)	Budget allocated (Lakhs)
		DNA, RNA, protein and for carrying out regular molecular activities.		
6.10	Real Time PCR Machine	Required for proposed project to quantify the <i>Nosema</i> spore load within infected silkworm samples and qPCR helps in strain differentiation.	01	11.00
6.11	Automatic Nitrogen/Protein Estimation System with Accessories	Required for estimation of the nitrogen and protein content of the leaf and total plant (approved under the project)	01	10.50
6.12	Tractor mounted brush cutter	Required for mechanical maintenance of the field	01	0.50
6.13	Power Generator / Solar power panel	For power back up to the Training Hostel/Training Division/Farm-1	01	7.00
6.14	Computer with Printer	For replacement of existing old Computer of different sections of CMER&TI, Lahdoigarh; RSRS, Boko & RSRS, Imphal.	8	7.00
6.15	Interactive Panel	For Directors Chamber	01	3.0
6.16	Display Panels (Android TVs)	For display of technologies in the corridors of CSB-CMER&TI	02	1.20
6.17	Motor Cycle	A token provision has been kept in the Budget to purchase of Motor cycle for field visit by the technical personnel from time to time.	03	2.50
6.18	Air Conditioners	Required for Training Division.	02	1.20
6.19	Fan & fixture	A token provision has been kept for procurement of Fan & fixture of CMER&TI, Lahdoigarh & its nested units.	-	0.75
6.20	Library Books & Scientific Journal	A token provision has been kept for Lib. Books & Journals for CMER&TI, Lahdoigarh; RSRS, Boko & RSRS, Imphal.	-	0.75
6.21	Office Furniture	A token provision has been kept for procurement of Office Furniture of CMER&TI, Lahdoigarh & its nested units.	-	15.0
6.22	Muga & Eri PCT incubation centre	Muga & Eri startup incubation centre is proposed to encourage & provides essential support for new businesses through mentorship, funding access, affordable workspace, and networking opportunities in Muga & Eri Post cocoon sector. Additionally, it provides access to technology, R&D resources, and facilitates connections with investors and industry experts for the development of beneficiaries.	01	28.00
6.23	Construction of Seminar Hall (300 Capacity) in Quarter Campus along with Office space & museum	The main campus of CMERTI is in a remote location with limited accommodation and transportation facilities, making it challenging to host events with more than 100 attendees. However, the campus seminar hall is conveniently accessible to the town, offering better coordination with local authorities for state protocols and easier	01	250.00

#	Items/	Justification	Target	
	equipment/ other accessories		Physical (No)	Budget allocated (Lakhs)
		access for invitees and dignitaries.		
6.24	Construction of paver block roads in the Farm no.1, CMER&TI, Lahdoigarh	The internal roads of Farm no.1 are not concreted. The roads need to be constructed with paver blocks.	01	25.00
6.25	Construction of paver block roads in the Farm no.2, CMER&TI, Lahdoigarh	The internal roads of Farm no. 2 are not concreted. The roads need to be constructed with paver blocks.	01	25.00
6.26	Construction of Store Room	The store room is required for storing the office equipments, furniture etc. (One each at Farm-03 and GCC, Chenijan)	02	60.00
6.27	Renovation of Eri rearing house and Grainage house at GCC, Chenijan	Both the rearing and grainage houses are in poor condition and need renovation to improve operational practices. The doors and windows are damaged or rotten, and the floor and roof require replacement with new materials. Renovation is essential for this purpose.	01	20.00
6.28	Renovation of Training Block at Farm no1	There is seepage problem on the roof and walls of the building, broken window glasses, doors and window frames are rusted and broken, building colour is faded.	01	20.00
6.29	Muga rearing house under semi-field condition at GCC, Chenijan	Muga culture has been advancing toward indoor rearing in recent years. In this context, it is essential to evaluate the performance of Muga rearing under semi-field conditions, as this may provide significant insights into the feasibility of indoor rearing. To undertake this task, it is crucial to have a rearing house that incorporates both glass or sheet materials, shade nets, and other related accessories.	01	08.00
6.30	Drainage System at GCC, Chenijan	There is no drainage system exist in GCC, Chenijan Farm. It is required for avoid water logging during rainy sessions.	01	25.00
6.31	Irrigation system at Farm no.1, CMER&TI, Lahdoigarh.	Irrigation system is required for host plant maintenance at Farm no.1.	01	35.00
6.32	Entry gate and security house for GCC, Chenijan Farm	The presence of a well-established entry gate and security house provides a structured, secure, and organized environment, ensuring the protection of valuable genetic resources and research materials housed at the centre	01	20.00

#	Items/	Justification	Target	
	equipment/ other accessories		Physical (No)	Budget allocated (Lakhs)
6.33	Power Sprayer	For field disinfection	3	1.50
6.34	Battery operated powder duster	For uniform dusting of lime on eri chawki and late age worms	06	0.60
6.35	Plastic Tray washing machine	For washing of plastic trays used for chawki rearing, late age rearing, grainage etc.	02	0.80
6.36	Chawki leaf chopping machine	For demonstration of eri chawki rearing at field level	01	0.40
6.37	Automatic weather station for CMERTI Campus	For recording weather parameters	01	10.00
6.38	Boundary wall with Concertina coil at CSB- CMER&TI Quarter complex (Phase-II)	Required for protection of existing assets and safety of the in-house CSB staffs. Existing boundary walls are very old and damaged	01	25.00
6.39	Chainsaw	Required for pollarding of hostplants at farms	02	1.00
			Subtotal	652.9
RSRS I	mphal			
6.40	AC 2-ton	Existing 2 AC are out of service. It is very much required 2 new AC for replacement.	02	1.2
6.41	Interactive Panel	For training/meeting/video conferencing and Workshop	01	3.0
6.42	Conference system with Microphone, Chairman unit and Central Amplifier	This system is very much required for conference hall during workshop/meeting/conference for chairman and delegates.	12	1.3
6.43	Refrigerator	For use in preserving Oak tasar egg to enable to delay hatching for synchronization of host plant leaf sprouting.	01	0.35
6.44	Digital Camera	For taking good quality photographic record of silkworms, food plants, Oak tasar rearing techniques, preparation of life cycle, other technical related photographs for documentation etc.	01	0.60
6.45	Repairing/black topping of internal roads of RSRS, Imphal	The present roads are built more than 15 years ago and in dilapidated condition. Required for repairing/black topping.	01	20.00
6.46	Repairing/renovation of staff quarters of RSRS, Imphal	36 staff quarters need immediate repairing. The last renovation was carried out more than 15 years ago.	01	50.00
6.47	Repairing/renovation of Office Building of RSRS,Imphal.	There is seepage problem on the roof and walls of the building, broken window glasses, doors and window frames are rusted and broken, building colour is faded.	01	50.00
6.48	High configured All in one PC	For video conferencing/online meeting and online interview	1	1.00
6.49	Power Sprayer	For field disinfection	3	1.00
6.50	Net Shed with poles	For chawki rearing	01	2.00

#	Items/	Justification	Target	
	equipment/ other accessories		Physical (No)	Budget
				allocated
				(Lakhs)
6.51	Museum	Purchase of display items		1.00
6.52	Renovation of Field Lab. T. Khullen.	Erection of new sign board, Main Gate of iron, repairing and	01	3.00
		painting of roof and window, preparation of disinfection tank and		
		white washing of office building of Field Lab. T. Khullen etc.		
6.53	Fencing at Langol Farm	Erection of fencing at Langol Farm	01	0.50
			Subtotal	134.95
RSRS,	Boko			
6.54	Air Conditioner	For use in Meeting Hall	2	1.00
6.55	Ceiling Fans	For use in Office, Quarter	20	1.00
6.56	Desktop Computer	For use by Scientist- D and other staff	4	5.20
6.57	LCD Projector	For use in Training Hall	1	0.90
6.58	Laptop	For use in Training Hall	1	1.25
6.59	One Bolero	For Office Use	1	14.00
6.60	60 KVA Generator with shed	For Office Use and for use in Training Hall cum Hostel	2	24.00
6.61	Battery for UPS	For use in the UPS of Training Hall cum Hostel	20	0.80
6.62	Repairing of Type-IV quarter	The quarter is in dilapidate condition & needs immediate repairing	01	15.00
6.63	Repairing of Type-III quarter	The quarter is in dilapidate condition & needs immediate repairing	01	10.00
6.64	Repairing of Type-II quarter	The quarter is in dilapidate condition & needs immediate repairing.	01	6.00
		This quarter will be used for Eri rearing.		
6.65	Repairing of Type-I quarter	The quarter is in dilapidate condition & needs immediate repairing.	01	4.00
		This quarter will be used for Eri rearing.		
6.66	Labour Shed (2 Nos.)	The sheds are in dilapidate condition & needs immediate repairing.	02	6.00
6.67	Repairing of Internal Road (Approx 2.00	The internal roads has been damaged and needs immediate repairing	-	60.00
	km) 600m with black topping and 1.40 km			
	with concrete block			
6.68	Interactive Panel	For Training and demonstration	01	3.00
			Subtotal	152.15
REC, L	akhimpur		- · · · · · · · · · · · · · · · · · · ·	
6.69	Portable Projector	For conducting training programme. Currently the existing projector	01	0.50
		is not working properly. Portable projector is required as it is easy		
		to handle and can be transported easily.		

#	Items/	Justification	n Targe	
	equipment/ other accessories		Physical (No)	Budget
				allocated
				(Lakhs)
6.70	Air-conditioner	Muga seed cocoon and dfl preservation	01	0.50
6.71	Power tiller	Weeding and maintenance of the official plantation area	01	2.50
6.72	Desktop Monitor	For office use	01	0.20
6.73	Nylon net	Muga rearing	20	1.00
6.74	Plastic tray	Storage of the harvested muga cocoons	50	0.30
6.75	Muga reeling cum twisting machine	To conduct PCT programme and display the same to visitors	01	0.30
6.76	Eri Spinning machine	To conduct PCT programme and display the same to visitors	01	0.20
6.77	Slides, cover clip and moth crushing set	Microscopic examination	-	0.05
6.78	Exhibition Material	Display of material in exhibition	-	1.00
			Subtotal	6.55
EREC,	Fatehpur (UP)			
6.79	Desktop	For office purpose	01	0.75
6.80	Colour Printer	For office use	01	0.30
6.81	Office furniture	For office purpose	-	3.70
6.82	Exhibition Material	Display of material in exhibition/creation of museum at the Unit	-	3.00
6.83	Digital Microscope	For mother moth Examination	01	1.50
6.84	Interactive Panel	Required for trainings/ meetings etc	01	3.0
			Subtotal	12.25
6.85	Maintenance of existing Assets at Main	The amount is kept for general upkeep and maintenance of existing	-	50.00
	Institute and Nested Units	assets including face-lifting of buildings, urgent electrical repairs		
		and other unforeseen expenditures.		
6.86	Establishment of Centre of Excellence for	Proposal submitted on 25th January 2025 for the Establishment of	-	1634.25
	Vanyaresham Anusandhan (CEVA)	Centre of Excellence for Vanyaresham Anusandhan (CEVA) at		
		CSB-CMER&TI, Lahdoigarh		
Grand total for Asset creation including procurement of equipments, Vehicles, Civil Deposits, CEVA and Maintenance of Existing				2643.05
Assets				

Annexure-VII

#### 7. Revenue Generation-2025-2026

Sl. No.	Source of Revenue Generation	Physical (No.)	Revenue to be generated (Lakhs)
7.1	Patent (Technology)		
7.1.1	License Fee to be collected		8.0
7.1.2	Royalty to be collected		
7.2	Testing & Analytical charges (Sample)		
7.2.1	Testing of Soil/water/FYM/ Leaf etc		0.50
7.2.2	Quality analysis/ testing of products		0.0
7.2.3	Testing of cocoons/silk yarn/fabric etc.		0.0
7.3	Consultancy (Services)		0
7.4	Supply/ sale proceeds of cutting / Sapling/ seedling/ chawki worms/ cocoons/ Silk etc.		
7.4.1	Mulberry cutting		0.0
7.4.2	Vanya host plant sapling/ seedling	10000	1.0
7.4.3	Mulberry chawki worms		0.0
7.4.4	Mulberry Seed (DFLs)		0.0
7.4.5	Vanya seed (DFLs)		0.0
7.4.6	Cocoons		2.0
7.4.7	Output from R&D Projects (Silk, fabric etc)		2.0
7.4.8	Others (pl specify)		
7.4.8.1	Guest House/Hostel Charge		2.0
7.4.8.2	House rent/ electricity		9.0
7.4.8.3	Convenience charge		1.0
7.4.8.4	Other Misc. receipt (excess Payment recovery, computer advance recovery, auction proceeds etc.)		7.5
7.4.8.5	Course fees		0.5
7.4.8.6	Sale of course materials		1.5
	Total		35.00

#### Annexure-VIII

(Rs in Lakhs)

0.12

0.48

#### 8. Others

#

8.1.1

8.1.2

Assam Manipur

8.1.3 Arunachal Pradesh

## 8.1 Soil samples to be tested/analyzed during the year 2025-2026

State		Target		
	Physical (No)	Budget allocation		
	20	0.24		
	10	0.12		

10

**40** 

#### 8.2 Other activities to be carried out during the year 2025-2026 at the Main Institute & Nested Units

Total

#	Activity	Justification	Budget allocation (Lakhs)
CMER	&TI, Lahdoigarh		(2000)
8.2.1	Silkworm/Host plant Germplasm conservation activities	For conservation & preservation of silkworm/host plant germplasm	2.00
8.2.2	Raising of Muga & Eri Host plants, maintenance of perennial castor etc	To meet demand of improved varieties and for popularization in the field	2.00
8.2.3	Swatch Bharat activities at Main Institute and nested units	For conducting various activities at the institute under Swatch Bharat Abhiyan	4.00
8.2.4	Maintenance of farms/farm equipments/ campuses/rearing at Main Institute and all its nested units.	Additional mandays are required for general maintenance of farms/rearing of muga and eri silkworms/under various R&D projects and for general upkeep of the campuses at main Institute and all its nested units (Approx. 11000). The deficiency has been worked-out based on CSB norms of 2010.	55.00
8.2.5	Creation of Demo Eri Chawki Rearing centres at 05 locations in NE (Unit cost is Rs. 10.70 Lakh)	It is planned to popularize Eri Chawki Rearing Technology for which 05 Potential areas in Northeast will be selected. Chawki Rearing centres will be made operational in these areas for enhancing the eri raw silk production by 20%.	53.50
8.2.6	Adoption of 02 potential Muga/Ericulture villages	Implementation of Seri Model Village for enhancement of Silk and sericulture development. 200 famers will be adopted (100 each for Muga and Eri) with full technological, technical and market support. The budget proposed is for 1 <sup>st</sup> year and the study will be taken up in the project mode for 03 years.	100.00

8.2.7	Development, enhancement and cloud integration of the iOS and Android apps (Pebrine Detection	The software and cloud services are required for pebrine detection application.	15.00
8.2.8	Raw Material Bank	Revolving cocoon bank fund for procurement of Muga and Eri cocoons and their sale to provide market support to the farmers.	22.5
		Subtotal	254.0
RSRS,	Imphal		
8.2.9	Oak Tasar silkworm rearing, DFLs production and supply	To meet the seed supply demand for North east and North west India	1.00
8.2.10	Maintenance of eri strains	Purchase of disinfectants, rearing items, plastic mountage	0.50
8.2.11	Model farm for muga	Land preparation, seedling preparation, Labelling	0.20
8.2.12	Vermicompost	Preparation of vermin compost for field application	0.50
8.2.13	Adoption of seed rearer at RSRS, Imphal	For enhancing seed cocoon production of Oak tasar.	0.60
8.2.14	Adoption of seed rearer at T. Khullen	For enhancing seed cocoon production of Oak Tasar.	0.60
8.2.15	Raising of seedlings/ saplings of Oak tasar, eri,	To meet the demand of improved varieties and for popularization in the field.	1.00
	muga and mulberry host plants at RSRS Imphal		
		Subtotal	4.4
RSRS,	Boko		
8.2.16	Demolition of different buildings	The buildings are in dilapidate condition & needs immediate demolition	16.00
	Generator Shed: 1 No.		
	Grainage House: 1 No		
	Cocooning House: 1 No		
	Rearing House: 1 No		
	Training Hall cum Hostel:1 No.		
	Laboratory: 1 No		
	Type-II quarter: 3 Nos.		
	Working Shed: 3 Nos		
		G. Total	274.40

#### 9 Raw silk production Target for 2025-26 as per EFC document (Silk Samagra-2)

Eri Raw Silk Target: **8500 MT** 

Muga Raw Silk Target: **350 MT** 

CSB-CMER&TI and its nested units will coordinate effectively with respective DoSs for achieving the set target. State wise requirement for achieving the envisaged raw silk production target is attached as *Annexure-IX (Eri) and Annexure-X (Muga)*.

## Annexure-IX

State	Families associated	Total No of	Area under Host	Raw silk Production (2023-24) (MT)
	Eri culture	Sericulture Villages	plants (Ha)	
Assam	236272	8622	35081	5527
Arunachal Pradesh	4500	87	576	63
Manipur	18961	781	2200	43
Meghalaya	27044	2036	9336	1069
Mizoram	1172	211	514	11
Nagaland	13444	461	5378	394
Sikkim	50	56	-	-
Tripura	-	229	-	-
Others	-	-	4875	76
Total	301443	12483	57960	7183

## State wise current Status of Ericulture:

Infrastructure requirements for reaching Eri Raw Silk Production Target during 2025-26:

Types of seed	2023-24	2025-26
Parental (Lakh DFLs)	0.0010	0.0012
P-3 (Lakh DFLs)	0.040	0.0472
P-2 (Lakh DFLs)	1.197	1.416
P-1 (Lakh DFLs)	35.92	42.50
Commercial (Lakh DFLs)	897.88	1062.5
Raw silk production (MT)	7183	8500
Acreage required (Ha)	93379	110500
Cocoon shells required in MT	8978.75	10625.0
No. Spinning Mills reqd. 480 spindles (Annual Productivity 35MT)	205	243

## States wise Eri production Target for 2025-26

States	Target for 2025-26		
Assam& BTC	Egg (Lakh No)	750	
	Cocoon (Lakh No)	187500	
	Cocoon Shell (MT)	7500	
	Raw silk (MT)	6000	
Meghalaya	Egg (Lakh No)	144	

	Cocoon (Lakh No)	35938
	Cocoon Shell (MT)	1440
	Raw silk (MT)	1150
Nagaland	Egg (Lakh No)	62.50
	Cocoon (Lakh No)	15625
	Cocoon Shell (MT)	625
	Raw silk (MT)	500
Manipur	Egg (Lakh No)	6.25
	Cocoon (Lakh No)	1562
	Cocoon Shell (MT)	62.5
	Raw silk (MT)	50
Other states	Egg (Lakh No)	100
	Cocoon (Lakh No)	25000
	Cocoon Shell (MT)	1000
	Raw silk (MT)	800
Total Raw	Silk Production Target (MT)	8500

	2023-24		Target 2025-26	
Acreage and silk production state-wise	Area (Ha)	Raw silk (MT)	Area (Ha)	Raw Silk (MT)
Assam & BTC	35081	5527	50000	6000
Meghalaya	9336	1069	10000	1150
Nagaland	5378	394	6000	600 500
Manipur	2200	43	2200	200 50
Other states	5965	150	10400	1178 800
Plantation (Ha)(Perennial/annual)	57960	7183	78600	8500
Actual acreage required (Ha)	93379		110500	
Stray Plantation Ha (Castor/others)	35419		31900	

#### State wise Eri Host plant Acreage target for 2025-26

#### Note:

- 1. Presently about 38% of overall eri raw silk production is achieved by utilizing unaccounted stray plantations on road sides/river bunds/kitchen gardens etc.
- 2. The envisaged target for increasing host plant acreage has been fixed with systematic plantation of annual/perennial host plants in such a way that dependence on unorganized/stray plantation will be brought down to 28%.
- 3. The Units in the respective states will initiate massive plantation drives and coordinate with respective DOSs for achieving the target.

Annexure-X

## Muga Raw Silk production Target for 2025-26 under EFC document

#### State wise current Status of Muga:

State	Families associated with	Total No of Sericulture	Area under Host	Raw silk
	Muga culture	Villages	plants (Ha)	Production (2023-
				24) (MT)
Assam	31391	8622	21588	203
Arunachal Pradesh	2500	87	600	3
Manipur	359	781	253	0.1
Meghalaya	7018	2036	3480	42
Mizoram	1061	211	502	4
Nagaland	2151	461	860	0.30
Sikkim	-	56	-	-
Tripura	-	229	-	-
Total	44480	12483	27283	252

Infrastructure requirements (Seed, host plant Acreage & Post cocoon component) for reaching Muga Raw Silk Production Target during 2025-26

Particulars	2023-24	2025-26
Commercial dfls (Lakh g)	252	350
P1 Dfls (Lakh g)	42.00	58.3
P2 Dfls (Lakh g)	8.40	11.66
P3 Dfls (Lakh g)	1.05	1.46
P4 Dfls (Lakh g)	0.13	0.18
Acreage required (Ha)	12600	17500
Cocoons (Lakh No)	12600	17500
Reeling m/c reqd. (MRTM & Sonalika) Annual prod./machine: 60 Kg	4201	5833
Raw silk Target (MT)	252	350

## States wise Muga production Target for 2025-26

States	Target for 2025-26		
Assam + BTC	Egg (Lakh No)	250	
	Cocoon (Lakh No)	12500	
	Raw silk (MT)	250	
	Egg (Lakh No)	10	
Ar. Pradesh	Cocoon (Lakh No)	500	
	Raw silk (MT)	10	
Manipur	Egg (Lakh No)	5	
	Cocoon (Lakh No)	250	
	Raw silk (MT)	5	
Meghalaya	Egg (Lakh No)	60	
	Cocoon (Lakh No)	3000	
	Raw silk (MT)	60	
	Egg (Lakh No)	15	
Mizoram	Cocoon (Lakh No)	750	
	Raw silk (MT)	15	
	Egg (Lakh No)	8	
Nagaland	Cocoon (Lakh No)	400	
	Raw silk (MT)	8	
West Bengal	Egg (Lakh No)	2	
	Cocoon (Lakh No)	100	
	Raw silk (MT)	2	
	Total Raw Silk Production Target (MT)	350	

State wise Muga Host plant Acreage target for 2025-26

States	Host plant Area available in 2023-24 (Ha)	Raw Silk Production 2023-24 (MT)	Target Acreage (Ha) and Raw Silk Production (MT) 2025-26	
			Raw Silk (MT)	Host Plant area (Ha)
Assam + BTC	21588	203	250	12500
Ar. Pradesh	600	3	10	500
Manipur	253	0.1	5	250
Meghalaya	3480	42	60	3000
Mizoram	502	4	15	750
Nagaland	860	0.30	8	400
West Bengal	88	0.09	2	100
Total	27371	252	350	17500

**Note:** For producing 350 MT of muga raw silk 17500 ha host plantation is required. Therefore, the existing plantation is underutilized. Units in the respective states will coordinate with respective DoSs for effective utilization of the host plants for achieving the set raw silk target.

\*Target of host plant area mentioned above refers to the systematic//block plantation to reach the envisaged target of silk production for 2025-26.