CSB-CENTRAL TASAR RESEARCH AND TRAINING INSTITUTE, RANCHI

1. OrganizationalSet up

Unit	No.	Place
RSRS	06	Tropical: 1. Dumka (Jharkhand) 2. Baripada (Odisha) 3. Bhandara (Maharashtra) 4. Jagdalpur (Chhattisgarh) 5. Warangal (Andhra Pradesh) Temperate: 6. Bhimtal (Uttarakhand)
P4 Station	01	Tropical: 1. P4 Station, Chakradharpur (Jharkhand)
REC	03	Tropical: 1. Kapistha (West Bengal) 2. Seoni-Champa (Chhattisgarh) Temperate: 3. Palampur (Himachal Pradesh)
Raw Material Bank	01	1. RMB, Chaibasa (Jharkhand)

2. R&D Projects, TOT, ECP, CBT etc:

Item	Target	Remarks
1. CSB coded Research projects		
1.1. With PI from the Institute		
1.1.1. On-going projects during the year 2024-2025	17	**Annex 4.I.1**
1.1.2. Projects to be concluded during the year 2024-2025	02	**Annex 4.I.2**
1.1.3. New Projects to be initiated during the year 2024-2025	09	**Annex 4.I.3**
1.2. With CI from the Institute		
1.2.1. On-going projects during the year 2024-2025	01	**Annex 4.I.4**
1.2.2. Projects to be concluded during the year 2024-2025	00	**Annex 4.I.5**
1.2.3. New Projects to be initiated during the year 2024-2025	00	**Annex 4.I.6**
2. Transfer of Technologies (ToTs)		
2.1 On Station Trials (OST)		**Annex 4.II.1**
2.1.1. No. of technologies to be validated	03	
2.1.2. No. of trials/locations to be covered	16	
2.2 On Farm Trials (OFT)		**Annex 4.II.2**
2.2.1. No. of technologies to be demonstrated	05	
2.2.2. No. of locations to be covered	15	
2.2.3. No. of stakeholders to be covered	150	
3. Capacity Building & Training (CBT)		**Annex 4.III**
3.1. No. of programmes to be conducted	62	
3.2. No. of stakeholders to be covered	1350	
4. Extension Communication Programs (No.)		**Annex 4.IV**
4.1. Number of programmes to be conducted	104	
4.2. No of stakeholders to be covered	5600	
5.Soil analysis services provided		**Annex 4.V**
5.1. No. of states to be covered	03	
5.2. No. of samples to be analysed	200	
6. Information, Education & Communication		**Annex 4.VI**
6.1. Periodicals	3	
6.2. Publications	35	

6.3. Extension literature	02	
6.4. Films / Videos	05	
6.5.Social media	250	
7. Patents to be filed/ granted, technologies to be commercialized, Software, mobile/android app to be developed etc.	1/3/1/0	**Annex 4.VII**
8. Procurement of equipments & other accessories	286.93	**Annex 4.VIII**
9. Other activities *(pl specify)*	17	**Annex 4. IX**
10. Revenue to be generated (Rs. in Lakhs)	25.00	**Annex 4. X**

***** *Programmes in convergence with ICAR-KVKs and expenditure on engagement of seasonal labour not included.*

1. CSB coded Research projects

1.1. With PI from the Institute

Annex-4.1.1

1.1.1. Ongoing projects during the year 2024-2025 (Rs. Lakhs)

#	Code	Title	Start	End	Milestones to be crossed	Progress to be achieved	Budget allocation
At main institute							
1	PIB 04009 SI	Evaluation of identified hybrids of Terminaliaarjuna × T. tomentosa and drought tolerant accessions of T. arjuna for their suitability in different tropical tasar silkworm rearing regions.	Oct 2021	Sep 2027	Recording of growth and yield attributes, leaf morphological and physio-biochemical traits2ndcrop period. Soil sampling and Analysis of soil nutrient content.	Assessment of growth and yield of different test entries	10.18
2	ARP 04016 MI	Tasar Silkworm Disease Monitoring and Management in North &Central states of India.	Mar 2023	Feb 2028	Disease monitoring, visit to respective grainage, Data compilation, analysis, preparation and submission of report. .	As per plan Disease monitoring in 10 North & Central states of India will conducted	12.58
3	AIB 04019 MI	In situ Conservation of RailyEcorace of Tasar Silkworm in Chhattisgarh	Mar 2023	Dec 2027	Recruitment of Conservation Resource Person (CRP) & Conservation Persons (CPs) Orientation training to all new recruits. Collection of wild cocoons (First generation Chaiti) and their preservation.	Recruitment and training of CRP & CPs. Raily- Chaiti cocoons would be collected and Pagoda would be established. Creating awareness to the local people. Conservation of wild cocoons (First generation Chaiti)	44.35

					Establishment of Pagoda and required materials in the conservation zone. Training/awareness for local people for conservation Grainage activity *in situ* in pagodas Release of eggs on host plants through leaf cups and releasing of gravid moths. Observations of life cycle stages through litter fall/cocoon Genetic characterizations of Railyecorace. Analysis of Meteorological (Average temperature, humidity, rainfall, photoperiod) and ecological data (geoposition, edaphic, host plants, pests, predators and hydrological data).	• Conservation of wild cocoons (Second generation Bhado) • Genetic characterization and metadata would be analysed	
4.	ARP 04012 SI	Developing ectomycorrhizal bio-inoculants for improving survival and leaf yield of *Terminaliaarjuna* and *Terminaliatomentosa*	Feb 2022	Jan 2026	Establishment and maintenance of plantation	Establishment of plantation to assess the effect of ECM on plant growth	3.35
5	ARP 04016	Tasar silkworm disease monitoring and management	Mar 2023	Feb 2028	Disease monitoring and detection as per schedule (random samplings) Disease monitoring locations will be tagged with the help of GPS. Disease survey, visit to respective grainage, Data compilation, analysis, preparation and submission of report. Collection of disease samples to morphological characterization of the	Disease monitoring will be done. Systematic documentation and reporting. Various morpho-variants will be identified	22.12

					pebrine		
6	AIB 04017 MI	Selection of Stable Thermo-tolerant line(s) of Tropical Tasar Silkworm *Antheraeamylitta* – Phase II	Mar 2023	Feb 2026	S10 generation cocoons to be incubated for natural high temperature stress. High temperature stress to be given for the selection of thermotolerant line. S11 generation thermo-tolerant lines to be selected. Rearing of S11 generation to be completed in BSMTCs, RSRSs and REC in hotter zones. DGE to be validated for the genes responsible for thermotolerance in *A. mylitta*. S12 generation thermo-tolerant lines to be selected. Rearing of S12 generation to be completed in BSMTCs, RSRSs and REC in hotter zones. DGE to be validated for the genes responsible for thermo-tolerance in *A. mylitta*.	Incubation of S10 generation cocoons at open grainage inside the cages of REC, Champa (Chhattisgarh); RSRS, Warangal (Telangana) and RSRS, Bhandara (Maharashtra). Exposure of S10 generation cocoons under high temperature stress (460C/4h for 3 days) in environmental chamber. Selection of S11 generation thermo-tolerant lines based on survivability, fecundity and egg hatching percentage. Analysis of complete cocoon parameters between temperature treated and control lines. Examination of thermal stress tolerance level of male and female moths. Rearing of S11 generation thermotolerantdfls in BSMTC, Chennur (Telangana); BSMTC, Bhandara (Maharashtra) and BSMTC, Pali (Chhattisgargh) along with RSRSs and REC. Exposing of S11 generation V instar larvae at higher temperature. Extraction and purification of total RNA. Validation of selected differentially expressed genes through RT-qPCR. Collection of S11 generation cocoons and expose at high temperature stress (460C/4h for 3 days) in environmental chamber.	21.2

						Selection of S12 generation thermo-tolerant lines based on survivability, fecundity and egg hatching percentage. Analysis of complete cocoon parameters between temperature treated and control lines. Examination of thermal stress tolerance level of male and female moths. Rearing of S12 generation thermo-tolerant dfls in BSMTC, Chennur (Telangana); BSMTC, Bhandara (Maharashtra) and BSMTC, Pali (Chhattisgargh) along with RSRSs and REC. Exposing of S12 generation V instar larvae at higher temperature. Extraction and purification of total RNA. Validation of selected differentially expressed genes the RT-qPCR.	
7	AIB 04018 MI	*In situ* Conservation of Modal Ecorace of Tasar Silkworm in Odisha	Mar 2023	Dec 2027	Recruitment and training to be given to CRP & CPs. Modal- Jhanji cocoons to be collected and Pagoda to be established. Creating awareness to the local people. Conservation of wild cocoons (First generation Jhanji). Conservation of wild cocoons (Second generation Modal). Genetic characterization and collected metadata to be analysed.	Recruitment of Conservation Resource Person (CRP) & Conservation Persons (CPs) Orientation training to all new recruits. Collection of wild cocoons (First generation Jhanji) and their preservation. Establishment of Pagoda and required materials in the conservation zone. Training/awareness for local people for conservation. Grainage activity *in situ* in pagodas Release of eggs on host plants through leaf cups and releasing of gravid moths. Observations of life cycle stages through	54.57

						litter fall/cocoons Collection of wild cocoons (second generation Modal) and their preservation. Grainage activity *in situ* in pagodas. Release of eggs on host plants through leaf cups and releasing of gravid moths. Observations on life cycle stages through litter fall/cocoons.	
8	AIB 04019 MI	In situ Conservation of RailybEcorace of Tasar Silkworm in Chhattisgarh	Mar 2023	Dec 2027	Formation of conservation groups. Core zone identification and fortification. Demarcation of buffer and peripheral zone. Orientation training to conservation resource person and conservation persons (local people). Pre-population survey of Railyecorace. Genetic and phenotypic characterization of Railyecorace population. Sensitizing brainstorming workshop by involving Directorate of Rural Industries (Sericulture Sector), State Forest Department and Stakeholders. Collection of wild cocoons (First and Second generation) and their preservation Grainage activity in situ in pagodas Release of eggs on host plants through leaf cups and releasing of gravid moths. Observations of life cycle stages through litter fall/cocoons	Core zone identification, pre-population survey, genetic and phenotypic characterization, orientation training to new recruits and sensitizing brainstorming workshop. Conservation of wild cocoons (First generation Chaiti) Conservation of wild cocoons (Second generation Bhado)	44.57
9	AIB 04020	*In situ* Conservation of SarihanEcorace of	Mar 2023	Dec 2027	Recruitment and training of CRP & CPs. Sarihan cocoons to be collected and	Recruitment of Conservation Resource Person (CRP) & Conservation Persons	42.34

	MI	Tasar Silkworm in Jharkhand			pagoda to be established in the ecopockets. Awareness programme to be arranged to the local people. Conservation of SarihanEcorace (for II crop) Conservation of SarihanEcorace (for III crop) Brainstorming to be organized workshop for sensitization.	(CPs) Orientation training to all new recruits. Collection of wild Sarihan cocoons (for II Crop) and their preservation Establishment of Pagoda and required materials in the conservation zone. Training/awareness for local people for conservation. Grainage activity *in situ* in pagodas. Erection of nylon net over *T. tomentosa*and *T. arjuna*trees inside the forest. Release of eggs on host plants through leaf cups, releasing of gravid moths through Chullu both inside and outside nylon net. Observations of life cycle stages through litter fall/cocoons Collection of wild cocoons (for III crop) and their preservation. Grainage activity in situ in pagodas. Release of eggs on host plants through leaf cups, releasing of gravid moths through Chullu both inside and outside nylon net. Observations on life cycle stages through litter fall/cocoons. Training/awareness for local people for conservation. Sensitizing brainstorming workshop by involving Directorate of Rural.	

10	APR04015 CN	Documentation and Validation of Indigenous Technical Knowledge (ITKs) in Tropical tasar Zone	Dec 2022	Nov 2025	Comparison of the ITKs with existing technologies & Analysis of grainage and rearing data for validation of ITKs Integration of the validated ITKs with improved existing technologies in association with tasar culture. Evaluation of crop performance with the integrated technologies against the existing technologies & Analysis of rearing data for integrated technology.	Comparison & recording of data between ITKs and existing technologies. Validation of selected ITKs Understanding the Integration of ITKs with existing technologies. Evolution of new integrated technology/Process.	7.29
11	PPA 04023 SIC	Development of Package for establishment and quality Leaf production of *Lagerstroemia speciosa* (Jarul)	Mar 2024	Feb 2029	Maintenance of the study plots with regular cultural operations. Data compilation and analysis.	Recruitment of Project Assistant and procurement of items. Assessment of morphological plant growth indices and survival of transplanted saplings. Data on disease and pest infestation. Maintenance of saplings. Data Analysis	10.50
12	PPA 04024 SIC	Effect of different plant spacing and pruning heights on chawki leaf productivity of tasar host plants (*Terminaliaarjuna. T. Tomentosa* and *Lagerstroemia speciosa*) and chawki silkworm rearing.	Mar 2024	Feb 2027	To study the influence of different plant spacings on foliage quality, quantity and chawki rearing and their economics.	Development of suitable/ ideal plant spacing and pruning height combination of tasar host plants for obtaining higher returns/ benefits in chawki rearing of tasar silkworm.	25.15
13	CEM 04021	Evaluation of Technologies and Machines developed	Mar 2024	Feb 2026	Recruitment of Project Assistant. Training of Project Assistant for evaluation of technologies and machineries in tasar silk	Information about present technologies and machineries exist in the tasar sector of Jharkhand and West Bengal states.	13.90

	MNC	in Tasar Post Cocoon Technology			sector. Collection of information about existing technologies/practices and machineries available in the tasar silk sectors in the states of Jharkhand, Chhattisgarh, Odisha, Bihar and West Bengal. Collection of information about reeling and spinning machines supplied under different schemes of Central Silk Board. Coordination with CSTRI subunits. Evaluation of new technologies and machines developed in the states of Jharkhand West Bengal & Odisha along with yarn quality.	Shortcomings for unpopular of new technologies and machineries developed by CTR&TI, Ranchi and CSTRI, Bangalore.	
14	BPS 04025 SNC	Studies on nutra-ceutical properties of silkworm pupae oil and development of a low-cost combination of vanya and mulberry pupae meal based feed for carp broodstock, and cultivable aquatic species	2024	2026	To formulate, assess and develop low-cost mulberry and tasar pupae waste-based fish feed (single and combined) for carp Broodstock, grow-out stage of giant freshwater prawn *Macrobrachiumrosenbergii,* and brackish water shrimp. To explore the nutra-ceutical properties of tasar pupae oil.	Development of nutrient rich prawn and shrimp feed, which will increase the pupae utilization and ultimately enhances the income of beneficiaries Data base on nutraceutical and cosmetic potential of dissipate tasar pupae oil, which can use in pharmaceutical and cosmeceutical applications	23.18
15	BPC 04025 SNC	Management of type II diabetic (T2D) condition	2024	2027	Regulation of glucose metabolism, and tissue injury (liver and kidney)	Role of tasar sericin for hypoglycemic, liver & kidney injury protection mechanism can be	54.31

		through tasar sericin			in T2D through tasar sericin Evaluation of wound healing potential of sericin-containing gel/nanofiber mat in diabetic wound	revealed, and therapeutic application can be used Development of wound healing products for T2D technology can be patented and commercialize	
16	PPA 04024 SIC	Effect of different plant spacing and pruning heights on chawki leaf productivity of tasar host plants (*Terminaliaarjuna. T. Tomentosa* and *Lagerstroemia speciosa*) and chawki silkworm rearing.	Mar 2024	Feb 2027	To study the influence of different plant spacings on foliage quality, quantity and chawki rearing and their economics.	Development of suitable/ ideal plant spacing and pruning height combination of tasar host plants for obtaining higher returns/ benefits in chawki rearing of tasar silkworm.	44.0
17	SIP 04022 SIC	Impact of weather change on tasar food plants and silkworm	Mar 2024	Feb 2027	Region wise historical data record for weather and pest data Procurement of chemical and fertilizers	Data base for weather and cocoon production. Data base for extreme weather events	20.00

Annex- 4.I.2

1.1.2. Projects to be concluded during the year 2024-2025 **(Rs. Lakhs)**

#	Code	Title	Start	End	Progress output	Utility of out-put/ Impact on silk industry	Budget allocation
At main institute							
1.	ARE 04011 MI	Species diversity, assessment of potential loss and management of predatory wasps in tasar ecosystem	Feb 2022	Jan 2025	Field evaluation of attractants during first and second crop Field evaluation of repellents and fly ash during first and second crop and data compilation, analysis and report preparation	Understanding of species complex of predatory wasps and their potential yield loss during different crop periods Management of wasps using bait traps	6.25
2.	PPA 04010 CN	Region and season specific selection of pruning and brushing schedule for tasar food plants and silkworm protection	Feb 2022	Jan 2025	Agro-climatic zone wise assessed the pruning date for production qualitative and quantitative leaf. Agro-climatic zone wise suitable brushing date for first crop and second crop for BV & first, second and third crop of TV. Identified GDD requirement of pruning to optimum foliage and brushing to cocoon harvesting	Agro-climatic zone wise recommendation of pruning and brushing schedule in different tasar growing state for quality leaf and cocoon production	13.30
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**** DBT funded***

Annex- 4.I.3

1.1.3. New projects to be initiated during the year 2024 -2025 **(Rs. Lakhs)**

#	Code	Title	Start	End	Objectives	Expected output	Budget allocation
At main institute							
1.	Project	Unraveling of genes	2024	2027	To analyse the differential gene	The outcome of the project will lead to	62.64*

	uploaded on e-proMIS website of DBT New Delhi (Registration No.: 45338)	responsible for productive traits of tasar silkworm *Antheraeamylitta*using functional genomics approach.			expressionandunravel the pathways linked to fecundity and shell weight. To validate the gene responsible for fecundity and shell weight.	explore the useful information on gene coding regions of *A. mylitta* with an aim to annotate and use available reference genome sequence for genetic characterization and functional genomic approach. This will be helpful to study the gene expression pattern, induction and regulation of genes related to qualitative and quantitative characters to enhance the productivity of tasar silk. Based on this, the inclusive molecular basis of different economically important traits of *A. mylitta*can be analyzed.	
2.	BTPR47097NER9519722023 (DBT Funded project under consideration)	Exploration of pheromones and kairomones for the management of parasitic pests of vanya silkworms	-	-	Isolationandcharacterizationofpheromones and kairomones Assessing the electrophysiological and behavioral assay Assessing the efficacy of the semiochemicals	Expected outcome would be development of pheromone e and kairomone blends to manage the major parasitoids of vanya silkworms by trapping them. Developed formulation can be integrated with existing traps devices and can be effectively utilized for the management of uzifly and ichneumon fly in both tasar and muga culture and it will greatly help to reduce the crop loss due to these pests.	**54.73***
3.	DBT Ref. No. PR45372 (Approved and fund yet	Development of KASP Based SNP Barcoding System for the Molecular Identification of Tropical Tasar	Apr 2024	Mar 2026	To perform extensive interspecific SNP screening and designing of KASP probe and primers. To validate the optimized ecorace specific KASP markers with all the available *A. mylitta*ecoraces from various locations in India.	KASP based SNP barcoding system for the specific identification of various *A. mylitta*ecoraces. The anticipated product of this proposed project is KASP based SNP barcoding system to discriminate the *A. mylitta*ecoraces, which would be a	35.76*

	not received)	Silkworm Ecoraces				significant molecular tool for establishing an efficient in-situ conservation strategy to overcome inter-crossing of ecoraces and the optimized KASP technology would be utilized further for marker-assisted selection (MAS) in systematic breeding programme to enhance the production of tasar.	
4		Study on lab to land gaps of tasar technologies in major tasar growing areas	Arp 2024	June 2024	To study the gaps in adoption of tasar technologies. To identify the constraints and list the suggestions in adoption.	The assessment of gaps in adoption of sericultural technologies at field level is quite essential to formulate future R&D strategies, besides identifying the constraints in adoption and suggestions offered by the farmers. The gaps in adoption of sericultural technologies will be estimated across major tasar grown areas to generate useful information for formulating policies for the sustainable growth of tasar sector besides to know the reasons behind reduction in tasar production.	24.54
5		Inflatable mucoadhesive magic vaginal tablet coin (VTC) for instant spermicidal action as local vaginal contraceptive and microbicide	2024	2027	Preparation of Vaginal Nanofiber tablet coin (VTC) Invitro&Invivo evaluations and safety profile of VTC as contraceptive device using rabbit animal model	Silk protein will be used for preparation of VTC. The product can be commercialized after successful clinical trials	25.42*
6	RC approve	Exploration of C sequestration	2024	2027	To study the C sequestration potential of	Consolidated data on the C sequestration potential of *Terminalia* sp. with respect to	12.35

	d	potential of *Terminalia* sp. and ways to increase the soil organic C stock			*Terminalia* sp. with respect to plant age/ height To identify the most efficient nutrient management practice with respect to the build-up of soil C stock	plant height or age of plantation. Soil management practice for improving the soil organic C stock and leaf litter degradation will be identified.	
7	RC approved	Establishment of tropical tasar host plant plantation along the roadside of national highways in Jharkhand	2024	2028	To establish tropical tasar host plant reserve in identified stretch on carriageways of NHAI. To explore the possibility of sericulture-based livelihood generation for the farmers residing on sides of carriageways.	Green coverage with arjun, asan and jarul trees with well-developed canopy, high esthetic, and economic value on both side of the carriageways on national highways. Environmental pollution management through carbon sequestration. Economic importance & generation of livelihood opportunities. On establishment of tasar plantation on both side of carriageways in both rows for economic activities, it may provide livelihood opportunity for 1 family with about 1224 trees (90% survivability).	32.59 (NHAI funded) *
8	RC approved	Development of Standard Operating Procedure for the effective maintenance of tasar host plants and diversity analysis among the field gene bank.	2025	2029	Maintaining the tasar host plant gene bank using cultural package of practices Regeneration of tasar host plant field gene bank Analysis of Genetic diversity tasar host plant population in gene bank	Gene bank will be protected and maintained properly. Genetic diversity will be analyzed for the further exploration and exploitation i.e. improvement of the host plant.	32.10
9	RC approve	Socio-economic impact assessment of	2024	2026	To estimate the economic viability of tasar sericulture technologies across	Preparation of semi-structured schedule, its pre-testing (small scale at farmers'	10.00

	d	tasar sericulture technologies in major tasar growing areas			adoption levels. To analyze the impact of tasar sericulture technologies in terms of raising income and livelihood to the beneficiaries.	level for reliability & validity of the questionnaire), necessary modification and finalization Impact assessment & its validating	

**** DBT funded***

1.2. With CI from the Institute (Collaborative projects with other CSB institutes)

Annex- 4.I.4

1.2.1. Ongoing projects during the year 2024 -2025 (Rs. Lakhs)

#	Code	Title	Start	End	Milestones to be crossed	Progress to be achieved	Budget allocation
1	SRP 08012 MNC	Development of a Rapid Antigen Test Kit for Diagnosis of Cytoplasmic Polyhedrosis in Vanay Silkworms (*Antheraea assamensis, A. mylitta and A. proylei*)	-	-	To develop a rapid antigen test kit (RAT) and to optimize the kit for detection of CPV-4 in vanya silkworms. To develop chemical-based disinfectant to control cypovirus-4 infection in rearing fields.	Point of care diagnostic tool, "Rapid Antigen Test" Kit will be obtained for early detection of Cytoplasmic Polyhedrosis in Vanaya Silkworms (*Antheraeaassamensis, A. mylitta*and *A. proylei*). The proposed kit will be useful for early diagnosis which can results in saving crop loss by undertaking suitable prophylactic measures and/or prevention of spread of disease in the rearing field. To developed RAT kit will have high commercial value in p4, p3 seed production centers and DOS rearing fields. □ Prophylactic mesaures to control Cytoplasmic Polyhedrosis in Vanaya Silkworms will be obtained.	0.60*

Annex- 4.I.5

1.2.2. Projects to be concluded during the year 2024 -2025 **(Rs. Lakhs)**

#	Code	Title	Start	End	Progress output	Utility of out-put/ Impact on silk industry	Budget allocation
At main institute							
1							

Annex- 4.I.6

1.2.3. New projects to be initiated during the year 2024 -2025 **(Rs. Lakhs)**

#	Code	Title	Start	End	Objectives	Expected output	Budget allocation
At main institute							
1							
2							

DBT projects (*)

2. Transfer of Technologies (ToTs) Programmesto be taken up during the year 2024 -2025 **Annex - 4.II.1**

2.1. On Station Trials (for validation of technology at CSB institutes/ RSRSs/ DoSunitsetc.) **(Rs. Lakhs)**

Sl. No	Name of the Technology	Unit Cost (Rs.)	At CSB institutes	RSRSs	DOS Units	Total	Anticipated impact	Budget allocation
1	Validation of fertilizer packages for leaf nutrition and fecundity	25000	1	2		3	The fertilizer dosage will enhance the soil fertility and nutrients of the host plants, which will enhance the productivity of tasar silkworm (Fecundity).	0.75
2	Evaluation of Fertilizers recommendation chart in tasar	20000	1	2		3	The Fertilizers recommended chart in tasar	0.60

	food plants						food plants will enhances the quality production of tasar food plants leaf	
3	Field evaluation of Botanical based repellents against silkworm pests	25000	1	9		10	Non-destructive management of tasar Silkworm pests through botanicals	2.50
	Total:		**3**	**13**		**16**		**3.85**

Annex- 4.II.2

2.2. On Farm Trials (for demonstration of Technologies at farmers' level) (Rs. Lakhs)

Sl. No	Name of the Technology	Unit Cost (Rs.)	No. of locations	No. of stakeholders	Anticipated impact	Budget allocation
1	Evaluation of cocoonase variant for cocoon softening/ degumming and silk surface modification	16000	3	30	Softening of cocoons with original colour and luster of tasar yarn	0.48
2	Evaluation of IPM for control of gall fly	5150	3	30	Reduction of Gall flies infestation and increase in productivity of cocoon.	0.15
3	Evaluation of IPM for control of stem borer in tasar food plants	5000	3	30	Reduction of stem borer in tasar food plants and increase in productivity of cocoon.	0.15
4	Establishment and popularization of New Improved accession102 and 123 of *Terminaliaarjuna*	10000	3	30	Validation of improved accession 102 and 123 of T*erminaliaarjuna.* Reduction of gestation period and increase in leaf yield	0.30
5	Evaluation of egg washing and disinfection machine	10000	3	30	Validation of egg washing and Disinfection machine. Drudgery reduction, water and labour saving.	0.30
	Total:		**15**	**150**		**1.38**

Annex-4. III

3. Capacity Building & Training programmes to be conducted during 2024 -2025

Sl. No.	Title of the training programme	Unit cost (Rs)	Target		
			No of progr ammes	No of stake holders	Budget proposed (Rs.in lakhs)
3.1	Structured Training Course*				
3.1.1	PGDS	3.00 lakh/ batch	1	20	3.00
3.1.2	Intensive Sericulture Training				
3.2	Farmers Skill Training	0.045/farmer	26	650	29.25
3.3	Exposure visit for technology awareness	0.040/farmer	09	180	7.20
3.4	Technology Orientation Programme	0.038/trainee	02	50	1.90
3.5	Sericulture Resource Centres (SRCs)		10	150	0.75
	Establishment of New SRC (04)	4.00 lakh/SRC	4	--	16.0
3.6	Training under Post Cocoon Sector**				
3.7	Management Development Programme under STEP				
3.8	Training for Adopted Seed Rearers (ASRs)				
3.9	Training to Registered Seed Producers (RSPs)				
3.10	Training on Seed Act				
3.11	Other Need Based Training Programme				
3.12	**Non-CBT:** Training programme funded by agencies other than CSB*			100	--
3.12.1	Farmers training of SIDHCOFED		10	200	--
3.12.2					
3.13	**Training under SAMARTH *****				
3.13.1	Pre-cocoon (Silkworm rearing)				
3.13.2	Post cocoon – Silk (Reeling, Spinning, Wet processing)				
3.13.3	Post cocoon – Handloom (Designing & Weaving)				
	Total		**62**	**1350**	**58.1**

**** Pl specify the details, ** Name of training with duration, *** only NSQF aligned courses***

Annex- 4. IV

4. Extension Communication Programmes to be conducted during2023 -2024 **(Rs. In lakhs)**

Sl. No	Programmes	Unit cost (Rs.)	Target		
			No of programmes	No of stakeholders	Budget allocation (Rs. In lakhs)
4.1	KrishiMela/ Reelersmela cum exhibition – at Main Institute	3.00	1	400	3.00
	KrishiMela/ Reelersmela cum exhibition – Nested units	1.50	6	1200	9.00
4.2	Farmers Field day	0.10	36	1800	3.60
4.3	Awareness programme	0.05	30	1500	1.50
4.4	Technology demonstration / Enlightenment programmes	0.01	30	600	0.30
4.5	Workshop*/ Seminars & Conferences	2.00	1	100	2.0
4.6	Other activities				
	Total	**--**	**104**	**5600**	**19.40**

Annex-4.V

5. Soil samples to be tested/analyzed during the year 2023 -2024

#	State	Target	
		Physical (No)	Budget allocation (Rs in Lakhs)
5.1	Jharkhand	200	0.70
5.2	Chhattisgarh		
5.3	Odisha		

Annex-4.VI

6. Information, Education and Communication-2023 -2024

#	Item	Target (No.)	
		Physical (No)	**Budget allocation (Rs. In lakhs)**
6.1	Periodicals	03	
6.2	Publications		
6.2.1	Research papers-National	10	
6.2.2	Research papers-International	05	
6.2.3	Proceedings/ Abstracts	10	
6.2.4	Books/ Book Chapters/ Manuals etc.	02	
6.2.5	Popular Articles	08	
6.2.6	Booklets, Brochures etc.	02	
6.3	Extension literature	02	
6.4	Films/ Videos	05	
6.5	Social media	250	
Total		**297**	**5.0**

Annex-4.VII

7. Technologies to be filed for Patent /grant of patent, technologies to be Commercialized/ Productsto be developed during 2024 -2025 (Rs. In lakhs)

#	Item	Patent No., Date of filing patent by NRDC, Technology commercialised to & Date of licence.	Target	
			Physical(No)	**Budget allocation**
7.1	**Patents filed**			
7.1.1	RESHMEEN GOLD			0.50
7.2	**Patents granted**			
7.2.1	Cordyceps mass production protocol			1.0
7.2.2	Cocoonase			1.0
7.2.3	Sericin purification and concentrating machine			1.0
7.3	**Technologies commercialized**			
7.3.1	RESHMEEN GOLD			5.0
7.4	**Android/mobile app, software developed etc.**			

7.4.1				
	Total			8.50

Annex-4.VIII

7. Procurement of equipments and other accessories proposed for the year 2024 -2025

(Some of the items which couldn't be procured during 2022-23 for want of fund are also included and will be removed if the same could be purchased during the current year)

#	Items/ equipments/ other accessories	Justification	Target	
			Physical (No)	Budget allocation (Rs in Lakhs)
8.1	Weather Tracker	Essential to analyse the temperature and humidity. (AIE 04004 CN).	10 No.	3.0
8.2	-20ºC Deep Freezer with backup system	-20°C Deep Freezer is very much essential for storing the tissue samples and enzymes for analysing the genes responsible for thermo-tolerance in A. mylitta. Since only one -20oC is in working condition in our institute, it is completely occupied and there is no space for further storage. (AIB 04017 MI).	1 No.	3.0
8.3	Iron Cages	Required for storing thermo-tolerant cocoons. (AIB 04017 MI)	7 Nos.	1.4
8.4	Camera with telescopic lens and GPS	Required to capture the photographs of silkworm, moths, cocoons and both silkworm and host plant pests along with its geoposition. (AIB 04018 MI).	1 No.	. 1.5
8.5	Autoclave	Important for sterilizing all the plasticwares/glassware/ buffers which are essential for the analysis of various metadata. (AIB 04018 MI).	1 No.	2.0
8.6	Vehicle – Two-Wheeler	Imperative for recurrent monitoring of conservation and collection of required metadata from the conservation zone. (AIB 04018 MI).	1 No.	1.5
8.7	Camera with telescopic lens and	Required to capture the photographs of silkworm, moths,	1 No.	1.5

	GPS	cocoons and both silkworm and host plant pests along with its geoposition. (AIB 04020 MI).		
8.8	Double distillation unit	Necessary for the preparation of buffers and samples for genotypic and soil nutrient analysis. (AIB 04020 MI).	1 No.	3.0
8.9	Vehicle (Two wheeler)	Imperative for recurrent monitoring of conservation and collection of required metadata from the conservation zone. (AIB 04020 MI).	1 No.	1.50
8.10	Almirah with Glass Door	Essential for storing Chemicals, Glasswares and Plasticwares.	5 No.	1.25
8.11	Swing bucket Rotor for PCR Plates	Essential for centrifuging the research samples for PCR based amplification and quantification.	1 No.	2.0
8.12	Automatic DNA/RNA extractor	Required for automatic extraction of DNA/RNA samples with auto-fed programme to reduce the manpower.	1 No.	4.0
8.13	Shaking water bath	Imperative for evenly distributing the temperature during the DNA/RNA/Protein extraction and estimation of other substances.	1 No.	3.0
8.14	Double beam UV Spectrometer	Spectrophotometer will be required for estimation of Phosphorus in leaf samples as suggested during 52nd RAC meeting of the Institute.	01	5.0
8.15	Digital pH meter	Digital pH meter will be required to measure the pH of the soil as well as pH of various solutions/ reagents during chemoassay.	01	0.20
8.16	EC Meter	E.C. meter will be required for measuring the electrical conductivity of the soil and the solutions/reagents.	01	0.10
8.17	Micro weighing balance with software	Micro weighing balance will be required for precise weighing of samples and chemicals for soil and leaf analysis.	01	1.70
8.18	Portable air entrainment system (Portable Volatile Assay System)	Very much essential for collection of sex pheromones and host associated kairomones.	01	6.49
8.19	Choice (Four-Arm) Arena Olfactometer with Air delivery system	To conduct the behavioral assessment of identified semiochemical compounds based on electrophysiological studies.	01	5.90

8.20	Insect growth Chamber	For rearing of and maintaining of target pest population under laboratory condition as study requires to lot of target insect cultures for bioassay studies.	01	3.00
8.21	-20ºC Deep Freezer with Inverter	-20 °C defreezer id required for preservation of volatile organic compounds and other temperature sensitive chemicals.	01	2.98
8.22	Dry bath incubator	To sterilize semiochemical collecting traps (Porapak Q odour cartridges).	01	0.71
8.23	Laboratory chairs	Required for laboratory use during various experimentations	04	0.20
8.24	File cabinet	File cabinet is very essential to maintain various files related to the projects going in entomology section	01	0.25
8.25	Universal testing Machine(UTM)	This machine in PCT section required for testing of samples of projects, evaluation of experiments done on daily basis and for conducting PGDS classes	01	5.00
8.26	Frame loom with Pneumatic lifting mechanism	A advanced Handloom is required for Demonstration purpose as well as for conducting research, Currently we have very old loom, which does not fit good for demonstration purpose	01	1.00
8.27	Batch type Hot Air Drier	At present, only one hot air oven is working in post cocoon technology which is mainly for drying of samples and yarns. Earlier present hot air dryers, which is very old and not in working condition has been declared unserviceable. There is urgent need of batch type hot air drier of at least 10000 cocoons capacity for proper stifling of cocoons received from other departments as well as well as post cocoon technology experimental cocoons	01	0.50
8.28	Micro Tub Dyeing Unit with accessories (2 Kg Capacity)	To conduct dyeing of yarns using natural dyes and other dyes for experimental purpose	01	1.20
8.29	Winding Machine with setup	For conversion of Hank to warp bobbin & weft pirn proper winding machine is not available in PCT Section, also for test of winding breaks facility is not available in the section	01	0.60

8.30	Computer (All in One)	There is only one computer in the section which is not working properly	01	0.60
8.31	Multifunction Printer	There is only one black &White printer in the section and is very old, not working properly	01	0.30
8.32	Office Table (Full Secretariat)	Office table is too old and damaged, hence new tables are required	02	0.50
8.33	Office Chair	Office Chair is too old and damaged, hence new Chair are required	02	0.20
8.34	Laboratory Table	To perform testing works in the laboratory	01	0.25
8.35	Laboratory Stool	Laboratory stools are required for performing test in PCT laboratory	02	0.10
8.36	Portable digital pH meter	This is required to check pH of cooking bath	01	0.10
8.37	Laptop	For carrying out the official work during off office hours or during official tours.	01	1.00
8.38	Bench top centrifuge with three rotors: 50 ml, 15 ml and 2 ml	Required for various soil tests and laboratory work related to different projects of the section	01	2.50
8.39	Inverter 5 KVA	Required to conduct uninterrupted sectional work during the frequent power cuts	01	2.30
8.40	Automated Nucleic acid extraction system (magnetic bead based)	Required for extraction of DNA and RNA from various types of samples ranging from soil, pure cultures of microbes, plant tissue, silkworm tissue, etc.	01	4.00
8.41	Split AC: 2 Ton, with particle filter and dehumidifier	Required for sitting room of Soil Science section during peak summer season	01	0.80
8.42	Soil moisture monitoring system	Required to study the soil moisture level at different seasons currently for assessing litter decomposition rates and C turnover rates with respect to soil moisture and will be required for future studies on irrigation or drought tolerance.	01	5.0
8.43	Portable soil moisture meter	Required to measure soil moisture at different sites of study	02	0.5

		at various points of time and also required for soil moisture measurements in pot experiments and nursery studies		
8.44	Laptop	Data recording and analysis for the project [PPA 04024 SIC] Effect of different plant spacing and pruning heights on chawki leaf productivity of tasar host plants (Terminaliaarjuna. T. Tomentosa and Lagerstroemia speciosa) and chawki silkworm rearing. (March 2024 – February 2027) (PI: Dr.HarendraYadav, Scientist-C)	01	1.2
8.45	Borewell	Irrigation management for Agroforestry in Tasar culture	01	10.0
8.46	Trolly	Utilization in farm management activities	01	1.50
8.47	Printer cum Scanner	Essential for Sectional (Farm Management and Agroforestry section) activities	01	0.50
8.48	Tanker	For watering the plants under NHAI project	01	1.50
8.49	Weed cutter	For cleaning the roads under NHAI project	06	3.0
8.50	Earth auger	For digging the pit for plantation under NHAI project	06	1.5
8.51	Wheelbarrow trolley	For carrying FYM, seedlings etc. under NHAI project	20	1.6
8.52	Computer	For data recording, compilation, and analysis under NHAI project	01	1.2
8.53	Soxhlet extractor	Separation of oils	01	1.0
8.54	Rotary Evaporator	Extraction of organic solvents	01	4.0
8.55	ELISA Reader	For enzymatic analysis	01	5.0
8.56	Lyophilizer	Drying of sericin during cooling condition	01	15.0
8.56	Autoclave	Boiling of cocoons, sterilisation of glassware and solutions	01	1.0
8.58	Defreezer (-20°) (with 2hr power back-up)	Storing of samples, enzymes and chemicals	01	5.0
8.59	Refrigerator	Storing of chemicals and solutions	01	0.5
8.60	AC	For lab purpose and officers	2 No	1.50
8.61	Computers with printer	For proper implementation of e-office	3 No	2.00
8.62	Microtome	Essential for thin section of tissue sample. Essential for	1 No.	15.5

		histopathology studies		
8.63	Automatic tissue processing unit	Essential for tissue processing for histopathology studies	1 No.	3.0
8.64	Biosafety cabinet class II (Type A2)	Very much essential for safe transfer of pathology related microbial samples.	1 No.	1.00
8.64	Minifuge (microcentrifuge)	Essential for processing small quantity of samples	1 No	0.8
8.65	Magnetic stirrer	Essential for sample processing	1 No	0.2
8.66	Biosafety cabinet (For RNA isolation)	for RNA isolation ensures sample integrity and minimizes contamination risks, thereby safeguarding both experimental accuracy and operator safety.	1	4
8.67	Thermocycler /PCR	To amplify DNA fragments, enabling the detection and analysis of specific genetic sequences with high sensitivity and specificity.	1	5
8.68	High configuration Desktop	Helpful in providing the computational power required for analyzing vast datasets and conducting complex bioinformatic analyses efficiently.	1	3
8.69	Agarose gel electrophoresis unit	Separating DNA and RNA fragments based on size, aiding in the analysis of gene expression patterns, RNA sequencing, and identification of genetic variations.	1	1.5
8.70	Refrigerated centrifuge	For the stepwise separation and isolation og genomic material for other downstream analyses	1	4
8.71	Centrifuge/vortex multispin	To mix and separate the targeted samples in different steps of genomic material isolation.	1	0.20
8.72	Laptop	For carrying out the official work during off office hours or during official tours.	01	1.00
8.73	Muffle Furnace	To change physical properties of samples at very high temperature for analysis.	01	1.20
8.74	Automatic Weather Station	For collection weather data from different centre to main server, Generate region specific historical weather data and its trend and will utilized for forewarning of pest and disease in tasar food plants and silkworm.	04	20.00

8.75	Workstation with Specification Processor: Intel Xeon Gold Number of cores/processor: 24 RAM size: 256 GB RAM Expandable upto: 1024 GB SATA Drive Capacity: 6 TB Graphics Card: 16 GB Display Resolution: 3840 x 2160	Workstation is very much essential to perform various analysis of both genomic and transcriptomic data viz., Genome annotation, linkage mapping, differential gene expression analysis, pathway enrichment, etc. Especially it is very much essential for performing SNP based genetic characterization within and between the ecoraces collected from various states all over India.	1 No.	15
8.76	Two wheeler	Emotive for recurrent monitoring of conservation and collection of required meta data from the conservation zone (AIB04019MI)	1 No.	1.50
8.77	Electronic weighing Balance 200 kg	For weighing pruned plant samples, cocoons, and other farm material like fertilizers, FYM, etc.	1	0.5
8.78	High Precision Weighing Balance with Anti-vibration table (0.01 mg – 220 g)	It is crucial for enhancing the accuracy and reliability of measurements in molecular research. This equipment will significantly improve the precision of quantitative analyses and experimental reproducibility by minimizing environmental interferences. It is essential for conducting sensitive and accurate experiments that require meticulous weight measurements of chemicals and biological samples.	1 No.	4.0
8.79	Type I – Ultrapure water purification system.	It is crucial for our proteomics and genomics research, where the highest purity water is essential to avoid contamination in sensitive experiments. This system will ensure the reliability and accuracy of our analytical results by providing consistent Type I water, free from pyrogen, nuclease, bacteria and particulate. This will directly enhance the quality of our DNA, RNA, and protein analyses.	1 No.	12.0
8.80	Benchtop pH Meter	It is essential for our molecular research to accurately	1 No.	2.0

		measure the pH levels of various solutions/buffers, a critical parameter in many biological and chemical experiments. This equipment will enhance the precision of our experimental conditions, ensuring reproducibility and reliability in our research outcomes. It is indispensable for experiments involving enzymatic reactions and protein studies where pH is a crucial factor.		
8.81	Stabilizers for preinstalled Air Conditioners	Stabilizers are essential to ensure consistent and reliable operation under fluctuating voltage conditions. Stabilizers will protect the AC units from voltage spikes and drops, thereby extending their lifespan and reducing maintenance costs. This will provide a stable and controlled environment, crucial for preserving the integrity of temperature-sensitive equipment and experiments.	7 No.	0.5
8.82	Audio recording system	It is essential for recording of important meetings minutes	1	0.25
8.83	Stabilizers for AC	It is essential to overcome the power fluctuation in AC	2	0.20
8.84	Digital Podium	It is essential to organized seminar/ symposium in conference -2	1	3.00
8.85	Interactive / display panels	It is essential for displaying digital banner and interaction in online meeting	1	3.00
		Total		**239.48**

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NESTED UNITS

8.I	**RSRS, DUMKA (Jharkhand)**			
1	Air Conditioner	Required for In-charge chamber-Presently AC not available at the unit	1	0.50
2	Laptop	Required for In-charge/Scientist-D	1	0.80
3	Printer along with scannet	Present printer is absolute and not properly working	1	0.30
		Total	**3**	**1.60**
8.II	**RSRS, BARIPADA (ODISSA)**			
1	RO Water Purifier	Drinking water facility not available in the office	1	0.20
2	Micro Centrifuge	Research work	1	0.50
3	Mixer Grinder	Research work	1	0.10
4	Pruning Saw	For farm management	5	0.10
5	Earth Auger	For farm management	1	0.10
6	Battery Operated Sprayer	For farm management	1	0.05
7	Lap top	For Office technical work	1	0.80
8	Invertor with Battery	Invertor with Battery not available and more power cut	1	0.20
9	Bolero 4 wheeler	Vehicle is not available at unit. It is required for Extension activities of the units	1	13.50
		Total	**19**	**15.25**
8.III	**RSRS, JAGDALPUR (CHHATTISGARH)**			
1	Student Microscope	Present Microscopes are absolute and not working	2	0.10
2	Lap top	To carryout technical activity of the units during ECP programmes, FST etc,.	1	0.80
3	Desktop Computer	Present computers are absolute and properly not working	1	0.50

		Total	**4**	**1.40**
8.IV	**RSRS, BHIMTAL (UTTARAKHAND)**			
1	Knap shak Sprayer 20 liter - 01	For farm management	1	0.06
2	Power Sprayer	For farm management	1	0.09
3	Chain Saw (Diesel)	For farm management	1	0.20
4	Brush Cutter	For farm management	1	0.15
5	Laptop	Office work	1	0.80
6	Printer with scanner	Office work	1	0.30
7	Desktop Computer	Office work	1	0.50
8	Projector	Office work	1	0.60
9	Buniyad reeling machine	For demonstration	3	0.3
10	motorized spinning machines	For demonstration	3	0.3
		Total	**10**	**2.70**
8.V	**REC, SEONI-CHAMPA (CHHATTISGARH)**			
	Student Microscope	Office work	2	0.10
	Laptop	Office work	1	0.80
		Total	**3**	**0.90**
8.VI	**REC, PALAMPUR (HIMACHAL PRADESH)**			
	RO Water Purifier	REC, Palampur	1	0.20
	Chain Saw (Diesel)	REC, Palampur	1	0.20
	Refrigerator Double door	REC, Palampur for storage of Oak tasar Cocoon and dfl's	1	0.30
	Buniyad reeling machine	Required for reeling and spinning of Oak tasar cocoons through SHG groups	3	0.30

	Motorized Spinning Machine (MSM)	Required for reeling and spinning of Oak tasar cocoons through SHG groups	3	0.30
	Laptop	Required to carry out technical activities	1	0.80
	Invertor with Battery	REC, Palampur	1	0.20
		Total	**11**	**2.30**
8.VII	**P4-TBS, CHAKRADHARPUR (JHARKHAND)**			
	5 HP Submersible pump	Required to carry out technical activities, present submersible pump is not working properly.	1	0.50
	Student Microscope	Required to carry out technical activities (Grainage) of the unit.	2	0.10
	3 KVA UPS with Battery	Required to carry out technical and administration activities of the unit.	1	0.40
	Laptop	To carry out Technical activities	1	0.80
	Desktop Computer	Office work	1	0.50
	Printer and scanner	P4 CKP	1	0.30
	Projector	Required to carry out technical activities of the unit.	1	0.50
	Pedestal Fan		2	0.10
	Desert Cooler		2	0.20
		Total	**8**	**3.40**
8.VIII	**RSRS, WARANGAL (TELANGANA)**			
	Laptop	Required to carry out technical and administrative activities	1	0.80
	Printer along with scanner	Required to carry out technical and administrative activities	1	0.30
	Bolero 4 wheeler	Present vehicle is absolute. It is required for Extension activities of the units	1	13.50
		Total	**3**	**14.60**

8.IX	**RMB, CHAIBASA (JHARKHAND)**			
	Desktop Computer	Office work	1	0.50
	Printer with scanner	Office work	1	0.30
	RO Aquagard (5 litter capacity)	For drinking water, presently not-available at unit	1	0.25
	Projector	Office work	1	0.50
		Total	**4**	**1.55**
8.X	**RSRS, BHANADARA (MAHARASHTRA)**			
	Lap top	To carry out technical activities of RSRS, Bhanadara, Maharashtra	**1**	0.80
	RO Aquagard (5 litter capacity)	For RSRS, Bhandara drinking water facility is not available at the centre	1	0.25
	Projector	To carry out technical activities of RSRS, Bhanadara, Maharashtra	1	0.50
		Total	**3**	**1.55**
8.XI	**REC, KAPISHTA (W B)**			
1	Lap top	To carry out technical activities of REC, Kapistha, West Bengal	**1**	0.80
2	Projector	To carry out technical activities of REC, Kapistha, West Bengal	1	0.50
		Total	**2**	**1.30**
		Grand Total	**97**	**47.45**
		Both Grand CTRTI + Nested unit	**239.48**	**286.93**

Annex-4.IX

8. Other activities to be carried out during the year 2023 -2024 **(Rs. in Lakhs)**

#	Activity	Justification	Budget allocation
9.1	Conservation and popularization of local eco-races in situ conditions	To carry out technical activity of nested units working under CTRTI, Ranchi for the year 2024-2025	4.38
2	Production of vermin-compost by units		1.00
3	P-4 rearing, grainage and other activities		7.35
4	Oak Tasar preponed rearing, cocoons purchase and other activities		4.29
5	Popularization of viable technologies		2.25
6	Maintenance of Farm/ Plantation		1.70
7	Adoption of farmers		0.30
8	2000 Man-days for Nested Units		8.36
9	RMB activities		#94.0
10	Institute advertisement	For publicity of activities carried out by CTRTI, Ranchi	1.00
11	Swachh Bharat Programme	Regular programme	0.60
12	Hindi Technical Seminar	Regular programme	5.00
13	International / National Conference on Vanya Sericulture	Regular programme	15.00
14	Foundation Day	Regular programme	2.00
15	Nursery Raising and Maintenance (1.0 lakh)	For mass level plantation in CTRTI, Ranchi & its Nested Units and others organization	10.00
16	Organizing RAC Meeting	For evaluation of R&D, ECP, CBT and ToTs programmes	3.00
17	Establishment of Incubation Centre	For regular demonstration post cocoon activities, encourage the entrepreneur and royalty generation	20.00
		Total:	**86.23**

Note:# Amount will be utilized under revolving fund of RMB and not booked under Annual Action Plan.

Annex-4.X

10. Revenue Generation during 2024 -2025(Rs. in Lakhs)

#	Source of Revenue Generation	Physical (No.)	Revenue to be generated
10.1	**Patent (Technology)**		
10.1.1	License Fee collected		0.50
10.1.2	Royalty collected		
10.2	**Testing & Analytical charges (Sample)**		
10.2.1	Testing of Soil/water/FYM/ Leaf etc		
10.2.2	Quality analysis/ testing of products		
10.2.3	Testing of cocoons/silk yarn/fabric etc.		
10.3	**Consultancy (Services)**	--	
10.4	**Supply/ sale proceeds of cutting / Sapling/ seedling/ chawki worms/ cocoons/ Silk etc.**		
10.4.1	Mulberry cutting		
10.4.2	Vanya host plant sapling/ seedling		0.10
10.4.3	Mulberry chawki worms		
10.4.4	Mulberry Seed (DFLs)		
10.4.5	Vanya seed (DFLs)		
10.4.6	Cocoons		2.00
10.4.7	Output from R&D Projects (Silk, fabric etc)		1.00
10.4.8	Others (pl specify)		
	Licence fees of Quarters and Hostel rent		5.00
	Recovery of loans and advance		2.50
	Refund of advance deposits		2.00
	Rent & Hiring Charges/Electricity		4.00
	Sale of miscellaneous		4.00
	Interest/ Penalty		0.40
	Previous year recovery		3.50
	Total		**25.00**