

CENTRAL SERICULTURAL RESEARCH & TRAINING INSTITUTE, PAMPORE KASHMIR (UT)**1. Organizational Set up**

Unit	Nos.	Place
RSRSs	02	1) Sahaspur, Uttarakhand 2) Miransahib, Jammu
RECs	03	1) Lamberi, Jammu & Kashmir 2) Ghumarwin, Himachal Pradesh 3) Basti, Uttar Pradesh
P4 Basic Seed Farm	01	1) Basic Seed Farm, Manasbal (Kashmir)

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.	Ongoing projects during the year 2023-24	05	Annex 3.I.1
1.1.2.	Projects to be concluded during the year 2023-24	04	Annex 3.I.2
1.1.3.	New Projects to be initiated during the year 2023-24	06	Annex 3.I.3
1.2.	With CI from the Institute (Collaborative)		
1.2.1.	Ongoing projects during the year 2023-24	06	Annex 3.I.4
1.2.2.	Projects to be concluded during the year 2023-24	--	Annex 3.I.5
1.2.3.	New Projects to be initiated during the year 2023-24	--	Annex 3.I.6
2.	Transfer of Technology		
2.1	On Station Trials (OST)	--	Annex 3.II.1
2.1.1	No. of technologies to be validated	--	
2.1.2	No. of trials/locations to be conducted	--	
2.2	On Farm Trials (OFT)		Annex 3.II.2
2.2.1	No. of technologies to be demonstrated	06	
2.2.2	No. of locations to be covered	18	
2.2.3	No. of stakeholders to be covered	276	
3.	Capacity Building & Training (CBT)		Annex 3.III
3.1	No. of programmes to be conducted	62	
3.2	No. of stakeholders to be covered	1100	
4.	Extension Communication Programs (No.)		Annex 3.IV

4.1	No. of programmes to be conducted	138	
4.2	No. of stakeholders to be covered	4420	
5.	Soil analysis services provided		Annex 3.V
5.1	No of states to be covered	05	
5.2	No of samples to be analysed	275	
6.	Information, Education & Communication		Annex 3.VI
6.1	Periodicals	03	
6.2	Publications	40	
6.3	Extension literature	10	
6.4	Films / Videos	02	
6.5	Social media	100	
7.	Patents to be filed/ granted, technologies to be commercialized, Software, mobile/ android app developed etc.	1	Annex 3.VII
8.	Procurement of equipments and other accessories		Annex 3.VIII
9.	Other activities (<i>pl specify</i>)		Annex 3.IX
10.	Revenue generation (Rs. in Lakhs)	14.00	Annex 3.X

1. CSB coded Research projects

1.1. With PI from the Institute

Annex- 3.I.1

1.1.1. Ongoing projects during the year 2023-24

(Rs. in Lakhs)

#	Code	Title	Start	End	Milestone to be crossed	Progress to be achieved	Budget allocation
At main institute							
1	AIB 03006 CI	Indo-Uzbekistan collaborative Research project on Improvement of Mulberry and Silkworm Breeding in Temperate Regions of India and Uzbekistan.	Aug, 2020	July 2026 (Extended till March 2030)	Quarantine of procured genetic material Raising of nursery of collected mulberry genetic resource. Evaluation of silkworm genetic resources under temperate climatic condition	The short-listed genetic resources of mulberry and silkworm will be kept under isolation for quarantine. Nursery will be raised after quarantine and it will be maintained as per package of practice Initiation of silkworm rearing of breeding material collected from SRIS, Uzbekistan	10.0
2	PIE 03012 SI	Evaluation of Mulberry Somatic Hybrids	Mar 2022	Feb 2025	Raising of Randomized block design and plantation of mulberry plantlets Biochemical and Economical Characteristics of somatic hybrids has to be recorded. Bioassay of somatic hybrids	Raising of Randomized block. Biochemical and Economical Characteristics of somatic hybrids Bioassay of somatic hybrids	1.60
3	PIC 03014 SI	Evolving superior mulberry varieties for temperate region through in vitro mutagenesis.	June 2022	May 2027	Induction of mutations in callus cells by chemical mutagens	Callus will be subjected to chemical mutagens during 2023-24	1.70

#	Code	Title	Start	End	Milestone to be crossed	Progress to be achieved	Budget allocation
At nested units							
4	PIE 03009 SI	Evaluation of mulberry genotypes for improvement in productivity and quality under sub-tropical conditions of Jammu	Dec 2021	Nov 2025	E01: Studies on growth & yield characters of test genotypes E-03: Study on disease and pest incidence	Data recording on growth, yield, disease & pest incidence Maintenance of test genotypes as per package of practice	1.55
5	PIB 03013 SI	Development of high yielding quality mulberry (<i>Morus</i> spp.) genotypes under sub-tropical conditions of Northern India.	June 2022	May 2026	E02: Transfer of selected hybrid progenies for further evaluation under PRT & establishment E03: Studies on growth & yield characters	Transplanting of selected hybrid progenies in main field in PRT and establishment Recording of yield and growth characters	1.10

Annex- 3.I.2

1.1.2. Projects to be concluded during the year 2023-24

(Rs. in Lakhs)

#	Code	Title	Start	End	Progress/output	Utility of out-put/Impact on silk industry	Budget allocation
At main institute							
1	AIB 03007 SI	Development of autumn specific bivoltine silkworm <i>Bombyx mori</i> L. suitable for temperate region of Jammu & Kashmir.	Mar 2021	Feb 2024	One autumn specific hybrid ASH-14 identified for temperate region of Jammu & Kashmir. ASH-14 hybrid will be evaluated through OST at three different locations viz., CSR&TI, Pampore, RSRS, Jammu & RSRS, Sahaspur	To stabilise the autumn crop in temperate regions of Jammu and Kashmir for yield improvement.	1.65
2	MOE 03010SI-Evaluation of improved mulberry silkworm hybrids and technologies for North & North West India (Rs. 6.04 lakhs)						
	C1	“Large scale famer trial of summer crop and its impact on autumn crop in selected areas of North West India (outcome of MOE-03001SI)”	Mar 2022	Feb 2024	Rearing of total 5000 dfls of SH6×NB4D2 (2500 DFLs each during summer and autumn season 2023)	Stabilization of autumn crop & its impact through Introduction of summer crop with suitable date of brushing & pruning schedule	1.50
	C2	Cocoon production improvement during Autumn rearing through fortification of mulberry leaf (outcome of PIN-3608)			Validation of technology- fortification of mulberry leaf with 0.5% Glutamic acid during autumn at Jammu, Kashmir, Uttarakhand & HP Validation of technology- fortification of mulberry leaf with 0.5% Glutamic acid during summer at Jammu & HP	Validation of the technology Increase in the cocoon yield due to fortification of mulberry leaf through amino acid	0.54
	C3	Popularization of CRC concepts &			Chawkie rearing demonstration for spring, summer & autumn	DoSs of North India may be in a position to draw strategy to strengthen the CRC operations	3.50

#	Code	Title	Start	End	Progress/output	Utility of out-put/Impact on silk industry	Budget allocation
		its strengthening at selected DoS CRC locations in North India.			Analysis of data and final recommendation	& ensure scientific chawkie rearing, procurement of equipments & farm maintenance etc.	
	C4	On farm trial of <i>BmNPV</i> tolerant silkworm hybrids in North & North West India (outcome of AIB-3569)			Field trails of shortlisted region specific <i>BmNPV</i> tolerant hybrids along with control at Kashmir, Jammu, Uttarakhand & UP Post cocoon parameter analysis and submission of final report	Shortlisted <i>BmNPV</i> hybrids after validation at field conditions of NW India is expected to reduce disease incidence especially grasserie.	0.50
3	MOT 03011 MI	Popularization of Mulberry Sericulture in Kargil (Ladakh UT)	Mar 2022	Feb 2024	Organizing plantation drive of 3000 mulberry saplings in Kargil Frontline demonstration to farmers on silkworm rearing in Kargil Establishment of demonstration plot in Kargil. Awareness programme to students in school colleges/universities Obtaining feedback from the farmers/students & stakeholders Submission of final report	Demonstration plot will be established in Kargil Mulberry wealth will be increased in Kargil Skill enhancement to farmers in sericulture Popularization of mulberry sericulture in Kargil	14.585
At nested units							
4	AIB 03008 CI	Development of nutrigenetic hybrids of bivoltine silkworm, <i>Bombyxmori</i> L. under sub-tropical conditions of North West India.	Mar 2021	Feb 2024	OST of shortlisted nutrigenetic hybrids at Pampore Jammu & Sahaspur during Spring & Autumn 2023 Data compilation and submission of final report	Superior nutrigenetic hybrids will be shortlisted for OFT	1.50

Annex- 3.I.3

(Rs. in Lakhs)

1.1.3. New Projects to be initiated during the year 2023-24

#	Code	Title	Start	End	Objectives	Expected outcome	Budget allocation
1	--	Biophysical and socioeconomic evaluation of mulberry-forage integrated system in Kashmir valley	Mar 2023	Feb 2028	To evaluate the forage productivity of the mulberry-fodder integrated system To study the soil dynamics and carbon stocking under the mulberry-fodder integrated system To work out the economics of mulberry forage system and socio-economic characterization at farmers fields	Integrated farming system on mulberry-feed shall be developed and the same can be helpful in augmenting fodder scarcity, acceptance of farmers for mulberry plantations and sericulture, besides different ecosystem services on soil health and productivity. The stakeholders shall be farmers/pastorals, Scientists/ Researchers working on fodder based agro-forestry systems, Forest Department, Extension agencies and so on	1.40
2	--	Primary yield trial (PYT) of newly evolved mulberry hybrids under temperate conditions of Kashmir valley	Mar 2023	Feb 2028	Evaluation of short-listed mulberry hybrids for growth leaf yield and yield attributing traits and propagation efficiency Bioassay of the mulberry progenies through silkworm rearing	Superior 2-3 mulberry progenies with early sprouting, high survival, adaptability, high yielding and nutritional superior suited for silkworm rearing for next phase evaluation <i>i.e.</i> Final Yield Trial (FYT).	0.50
3	--	Evaluation of drought tolerant mulberry genotypes through preliminary yield trial (PYT)	Jan 2023	June 2026	Evaluation of newly developed drought tolerant genotypes for leaf yield and associated agronomic traits under PYT. Qualitative assessment of superior genotypes through biochemical and silkworm moulting test.	Identification of 4-5 promising drought tolerant mulberry genotypes under PYT with better leaf quality and productivity. The selected promising genotypes will be further evaluated through Final Yield Trial (FYT) in the direction of developing a drought tolerant mulberry variety for its commercial exploitation.	7.75

1.2. With CI from the Institute (Collaborative projects with other CSB Institutes)**Annex- 3.I.4****1.2.1. Ongoing projects during the year 2023-24**

(Rs. in Lakhs)

#	Code	Title	Start	End	Milestone to be crossed	Progress to be achieved	Budget allocation
At main institute							
1	PIE 13001 MI	All India Coordinated Experimental Trials for Mulberry (AICEM- Phase-IV)	2019	2024	Pruning, maintenance and leaf harvest following the recommended cultural practices and schedules of the region Collection of data on leaf yield and other characters Collection of data on the incidence of pests and diseases Conducting bio-assay in spring and autumn using CSR2xCSR4 or zonal popular hybrid. Compilation of data of all the four test sites	Maintenance of plantation as per advocated cultural practices Data on leaf yield and other characters will be recorded during spring and autumn crop. Data on disease and pest will be recorded from two rows established separately at CSR&TI, Pampore and RSRS, Sahasapur. Bio-assay study will be conducted at all the four test sites using CSR2XCSR4. Data compilation & submission of results to PI.	5.00
2	MTL 01025 MI	Life cycle assessment of Mulberry Silk: A national assessment	Mar 2022	Feb 2025	To assess GHGs emission, GWP and C, N, water and energy footprints in the life cycle of Mulberry silk systems. To prepare life cycle Inventory of Mulberry silk and its product. To identify alternative practices to mitigate GHG emission and minimize the C, N and water footprints in mulberry silk production system along with their socio-economic implication.	Experiments, sample collection, GHGs, Water, N, C and energy for the temperate mulberry crops in identified sites. Transportation of the GHGs and other samples to the respective institute in stipulated time. Collection of the survey data through questionnaire.	11.60 (5.30+6.30) *Budget allotted for purchase of instruments in first year was not complete due to non allocation. Thus, the budget of the same i.e., 6.30 is proposed for 2023-24.
3	ARE 01028 MI	Recommendations of novel fungicidal and insecticidal applications for mulberry.	May 2022	Apr 2025	Procurement of chemicals, plastic wares and equipments Collection of disease samples, isolation and purification of pathogen associated diseases of mulberry and insect pests larvae for multiplication In vitro studies using selected fungicides/	Procurement of chemicals, plastic wares & other equipments Virulent pathogens associated with diseases of mulberry from susceptible mulberry plants will be isolated and insect pests will be reared. Effective fungicide/ nematicide/ insecticides will be identified in vitro.	4.0

					nematicides/ insecticide In vitro studies using selected fungicides/ nematicides/ insecticide	Selection of effective fungicide / insecticide molecule based on in vitro study for field study.	
4	AIB 02019 MI	Development of bivoltine hybrids with higher productivity and high temperature & humidity tolerance through Marker assisted selection	June 2022	May 2025	Rearing of F4, F5 and F6 population of 10 silkworm lines.	Rearing of F4, F5, F6 generation and segregation and maintenance of target characters.	5.42
5	MTS 13002 MI	Impact assessment of mulberry sericulture technologies in India	July 2022	June 2025	Crop wise data collection and analysis Survey of 400 Rearers & 30 Reelers in NW India Maintenance of data base with respect to technologies Expert consultation	Generation of crop wise data base with respect to technology intervention at GRLS Submission of compiled data to PI	2.95
At nested units							
6	MOE 02015 MI	Component II– Evaluation of high yielding and low temperature stress tolerance mulberry varieties C-01 & C-11	Feb 2022	Jan 2025	Studies on growth & yield traits in different seasons & locations of two genotypes C-01 & C-11 Recording data on pest & disease	Evaluation of high yielding genotypes under the sub tropical conditions of NW India	0.24

Annex- 3.I.5**1.2.2. Projects to be concluded during the year 2023-24**

(Rs. in Lakhs)

#	Code	Title	Start	End	Progress/Output	Utility of out-put/Impact on silk industry	Budget allocation
-	-	-	-	-	-	-	-

Annex- 3.I.6**1.2.3. New Projects to be initiated during the year 2023-24**

(Rs. in Lakhs)

#	Code	Title	Start	End	Objectives	Expected outcome	Budget allocation
-	-	-	-	-	-	-	-

2. Transfer of Technologies (ToTs) Programmes to be taken up during 2023-24**Annex- 3. II.1****2.1. On Station Trials (for validation of technology at CSB institutes/ RSRs/ DoS units etc.)**

#	Name of the Technology	Unit Cost (Rs.)	At CSB institutes	RSRs	DOS Units	Total	Anticipated Impact	Budget allocation (Rs. In Lakhs)
	-	-	-	-	-	-	-	-

Annex-3. II.2**2.2. On Farm Trials (for demonstration of Technologies at farmers' level)**

#	Name of the Technology	Unit Cost (Rs.)	No. of locations	No. Of stakeholders	Anticipated Impact	Budget allocation (Rs. In Lakhs)
1	Large scale famer trial of summer crop and its impact on autumn crop in selected areas of North West India (outcome of MOE-03001SI)”	--	2 (Jammu & HP- Summer and autumn season 2023)	100 (5000 DFLs of SH6XNB4D2)	Stabilization of autumn crop & its impact through Introduction of summer crop with suitable date of brushing & pruning schedule	1.50
2	Cocoon production improvement during Autumn rearing through fortification of mulberry leaf (PIN-3608)	--	2 (Autumn: Jammu, Kashmir, Uttarakhand & HP Summer: Jammu & HP)	30	Validation of the technology Increase in the cocoon yield due to fortification of mulberry leaf through amino acid	0.54
3	Popularization of CRC concepts & its strengthening	--	4 (Spring, Summer & Autumn)	50	Scientific chawki rearing.	3.50

	at selected DoS CRC locations in North India.					
4	On farm trial of <i>BmNPV</i> tolerant silkworm hybrids in North & North West India (AIB-3569)	--	3 (Kashmir, Jammu, Uttarakhand & UP)	48	Mitigation of disease incidence, especially grasserie.	0.50
5	Validation of high yielding bivoltine Silkworm (<i>Bombyx mori</i> L.) hybrids for temperate region of Jammu & Kashmir (AIB03004SI)	0.40	5 (Kashmir province of J&K)	24	High yielding single hybrid suitable for temperate region of Jammu and Kashmir	0.80
6	Validation of sustainable bivoltine silkworm double hybrids suitable to North West India (AIB03002SI)	0.50	02 (Jammu & Sahaspur)	24	Evaluation of new double hybrid for NW India	1.00

*Note: The 1-4 Trial of Technologies (ToTs) are part of ToT Project MOE03010SI

Annex- 3. III

3. Capacity Building & Training programmes to be carried out during 2023-24

(Rs.in lakhs)

Sl. No	Title of the training programme	Unit cost (Rs)	Target		
			No of programs	No of stakeholders	Budget proposed
3.1	Structured Training Course*	-	-	-	-
3.1.1	PGDS	-	-	-	-
3.1.2	Intensive Sericulture Training	15850	03	60	9.51
3.2	Farmers Skill Training	4500	24	590	26.55
3.3	Exposure visit for technology awareness	-	-	-	-
3.4	Technology Orientation Programme	3800	05	125	4.75
3.5	Sericulture Resource Centres (SRCs)	--	30	300	1.50*
3.6	Training under Post Cocoon Sector**	-	-	-	--
3.7	Management Development Programme under STEP	0.05	01	25	1.25
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	-	-	-	-
	Establishment of New SRC*	-	02	-	8.00
3.12	Non-CBT: Training programme funded by agencies other than CSB*	-	-	-	-
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	--	65	1100	51.56

*An amount of Rs.0.75 Lakhs (Max) can be spent under each existing SRC towards opex. (2x0.75=1.50)

Annex- 3. IV**4. Extension Communication Programmes to be conducted during 2023-24****(Rs. In lakhs)**

Sl. No	Programmes	Unit cost	Target		
			No of programmes	No of stakeholders	Budget allocation
4.1	Krishi Mela/ Reelers mela cum exhibition	1.50-3.00	03	800	6.00
4.2	Farmers Field day	0.07	24	1200	1.68
4.3	Awareness programme	0.05	24	1200	1.20
4.4	Technology demonstration / Enlightenment programmes	0.01	26	520	0.26
4.5	Workshop/ Seminars & Conferences	2.00	01	100	2.00
4.6	Other activities (Field visits)	--	60	600	--
	Total	--	138	4420	11.14

Annex -3.V**5. Soil samples to be tested/analyzed during the year 2023 -24****(Rs.in lakh)**

#	Item	Target	
		Physical (No)	Budget allocation
1	Jammu & Kashmir	100	0.30
2	Uttarakhand	50	0.15
3	Himachal Pradesh	50	0.15
4	Uttar Pradesh	50	0.15
5	Haryana& Punjab	25	0.10
	Total	275	0.85

Annex -3.VI

6. Information, Education and Communication during the year 2023 -24**(Rs.in lakh)**

#	Item	Target	
		Physical (No)	Budget allocation
6.1	Periodicals	03	1.50
6.2	Publications		-
6.2.1	Research papers-National	10	0.30
6.2.2	Research papers-International	10	0.50
6.2.3	Proceedings/ Abstracts	05	0.10
6.2.4	Books/ Book Chapters/ Manuals etc.	05	1.50
6.2.5	Popular Articles	05	--
6.2.6	Booklets, Brochures etc.	05	1.0
6.3	Extension literature	10	1.0
6.4	Films/ Videos	02	1.0
6.5	Social media (Twitter/facebook post)	100	--
Total		155	6.90

Annex-3.VII

7. Technology to be filed for patent/ granted of patent, Technologies to be Commercialized/ products to be developed during the year 2023-24

Sl. No.	Item	Patent No., Date of filing patent by NRDC, Technology commercialised to & Date of licence.	Target	
			Physical (No)	Budget allocation (Rs. In lakhs)
7.1	Patents filed			
7.1.1	A process for obtaining phytoecdysteroids from weeds of Amaranthaceae for synchronized maturation of mulberry silkworm.	Patent Application No. 1401/DEL/2013	01	
7.2	Patents granted	-	-	-
7.3	Technologies commercialized	-	-	-
7.4	Android/mobile app, software developed etc.	-	-	-

Annex -3.VIII

8. Procurement of equipment and other accessories proposed for the year 2023-24

#	Items/ equipments/ other accessories	Justification	Target	
			Physical (No)	Budget allocation (Rs in Lakhs)
I	CSRTI, Pampore			
1	Repair and renovation of quarters/office building	Some of the staff quarters/office building requires repairs.	18	25.00
2	Painting of institute buildings & staff quarters	Institute building and staff quarters requires painting	18	80.00
3	RCC boundary wall around the campus of CSR&TI, Pampore	Local police authority and CRPF team expressed concern over non availability of cemented wall around the institute and suggested to erect the same.	01	100.00
4	Construction of Director, quarter	Erection of Director Quarter	01	75.00
5	Green House (High tech)	R&D purpose	01	10.00
6	Motorised Washer	For disinfection of rearing building at SBG Division	2	0.30
7	Mono cocoon reeling machine	Ascertaining reeling parameters	1	0.50
8	Cocoon deflossing machine	Deflossing of cocoons	1	0.50
9	Humidifier	For silkworm rearing	4	1.00
10	Hot Air Drier	For cocoon drying	1	3.00
11	Mrida Parikshak kits	For soil testing	2	3.00
12	Weather system unit	Assessing the weather condition	1	0.50
13	Steam Boiler 100 kg	For post cocoon activities	1	10.00
14	Auto Sorter	Raw silk testing	2	3.50
15	Mono Cocoon Machine	Post cocoon work	1	0.20
16	Polyacrylic transparent closed chamber along with thermometer, batter operated fan-	Under R&D project MTL01025MI	1	2.50
17	Lysimeter	Under R&D project MTL01025MI	1	2.40
18	Clinometers	Under R&D project MTL01025MI	1	0.50
19	GPS Survey equipment	Under R&D project MOT03011MI	1	0.30
20	Heat Pillars (Boston)	Under R&D project MOT03011MI	5	0.50
21	Rearing stand	Under R&D project MOT03011MI	15	1.50
22	Laboratory Table	For post cocoon section	5	0.50
23	Steel Rack	Under the project ARE-03005SI	5	0.25
24	Almirah	For office purpose	7	2.10

25	Beds (folding with mattress) 3 x 6 ft	For staff during night duty	4	0.50
26	Examination chairs with Double headed stools	Laboratory work	4	0.25
27	Steel Racks	For use to keep files	5	0.50
28	Vacuum Cleaner	Cleaning purpose	1	0.10
29	Hand Carts (Steel / Wooden)	Office purpose	2	0.30
30	Wooden Bed	For training hostel	20	2.00
31	Inverter 1050VA (Luminous Make) with double Battery	For training hostel and office	2	1.00
32	Geyser 25 lts capacity	For use staff quarters/training hostel/office	10	2.00
33	Officer Chairs (Delux)	For PMCE & Training Division	7	0.25
34	Working/computer table Large/medium	Office work	3	0.35
35	Computer Desktop With Printers	For office staff	15	8.00
36	Epson/HP colour Printer 3 in one	Training/PMCE Division and office work	5	0.85
37	HP Scanner Cum Laser Jet Printer	Office work	2	0.50
38	UPS for Computer	For backup	6	0.75
39	Exhaust Fan	For rearing rooms	6	0.25
40	Technical Library Books & Scientific Journals	Enrichment of Library	10	0.50
II	RSRS Jammu			
41	Renovation of Old rearing Building	Renovation of 04 Nos Old rearing building (Administrative approval received during financial year 2020-21 and assessment done by PWD, Jammu report expected within financial year 2021-22)	04	50.00
42	Laminar Air flow system	R& D work	1	2.50
43	Auto Clave	R& D work	1	0.30
44	Epprovators	R& D work	1	0.30
45	Digital Hygrometer	R& D work	15	0.30
46	SPAD 502 Plus Chlorophyll meter	R& D work	1	1.60
47	Weighing Balance (Small/Large) upto 500gm	R& D work	2	0.50

48	Steel Measuring Scale	R& D work	2	0.25
49	Oven 50 kg.	R& D work	1	0.50
50	Digital weighing balance 20 KG capacity	Under Project PIE13001MI	1	0.30
51	Canvas irrigation pipes (fire brigade type) Diameter 3 inch, length 100 feet, joints 12 nos	Under Project PIE13001MI	6	0.70
52	BOD Incubator	Under Project PIE13001MI	1	1.00
53	Hot Air Oven	Proposed in the newly initiated project	1	1.0
54	Refrigerator	Proposed in the newly initiated project	1	0.50
55	Weighing balance (25 Kg capacity)	Proposed in the newly initiated project	1	0.10
56	High performance laptop	Proposed in the newly initiated project	1	0.90
57	Air Conditioner with built heaters/ Stabilizer	Sericulture section / Library section	2	2.00
58	Inverter with double battery	Sericulture/Moriculture section	1	0.75
59	Smart Board	For conference Hall	1	1.20
60	Room Heater (Bajaj make)	Admn/Sericulture/Tech/Moriculture Sections	10	0.50
61	Display Board	Main Office building	2	0.50
62	Paper Sheeder	Administrative section	1	0.10
63	Inverter (Solar)with panels & Battery	Administrative /Technical section	1	1.50
64	Air Conditioner with built heaters/ Stabilizer	Sericulture section/Library section	2	2.00
65	Smart TV	For conference Hall	1	1.00
66	Color printer	For office use	1	0.30
67	Scanner	For office use	1	0.20
68	Lap Top	For office use	1	0.75
69	Desktop computer	For REC Lambari	2	1.50
70	Printer	For REC Lambari	2	0.50
71	Big Tractor	For office use	1	8.50
72	Cooler	For office use	2	0.30
73	Exhaust Fan	For office use	2	0.10
74	Technical Library Books & Scientific Journals	For library	1	0.50
III	RSRS Sahaspur			

75	Renovation of Rearing buildings	Renovation of Rearing Buildings	05	180.00
76	Renovation of staff quarter/Conference hall	Renovation of staff quarter and Conference hall	25	50.00
77	White washing Administrative building	White washing of Administrative/Technical buildings	01	20.00
78	Digital weighing balance 20 KG capacity	Under Project PIE13001MI	1	0.30
79	Digital BOD Incubator	Under Project PIE13001MI	1	0.50
80	Hot Air Oven 200 ltrs.	Under Project PIE13001MI	1	1.20
81	Canvas irrigation pipes (fire brigade type) Diameter 3 inch, length 100 feet, joints 12 nos	Under Project PIE13001MI	6	0.70
82	Motorised Augur	Pit digging for mulberry plantations	1	0.75
83	Generator Set (40 KVA)	For office use	1	8.00
84	Electronic balance top loading (cap.5kg)	For recording leaf yield data for research project	1	0.40
85	Knapsack Mulberry Pruner cum harvester	For office use	1	0.80
86	Shelf rearing racks	For office use	5	0.50
87	UPS for Computer	For office use	2	0.30
88	Computer	For office use	1	0.60
89	Lap Top	For office use	1	0.80
90	Mini Tractor	For office use	1	7.00
91	Exhaust Fan	For office use	2	0.10
92	Cooler	For office use	2	0.30
93	Fans	For office use	5	0.25
94	Technical Library Books & Scientific Journals	For library	1	0.50
IV	P4 BSF Manasbal			
95	Auto Mist Humidifier	For silkworm rearing	2	0.50
96	Digital BOD Incubator	For office	1	0.50
97	Digital camera	For office	1	0.30
98	Humidifier	For silkworm rearing	2	0.50
99	Lawan Mover	Farm maintenance	2	0.25
100	Microscope	Laboratory work	1	0.50
101	Certirfuge machine (Digital)	Laboratory work	1	0.75
102	Canvas irrigation pipes (fire brigade type) Diameter 3	Irrigation purpose	6	0.70

	inch, length 100 feet, joints 12 nos			
103	Power tiller weeder with battery	Farm maintenance	1	1.00
104	Desktop Computer	For office use	1	0.70
105	Printer with Scanner	For office use	1	0.50

Annex -3.IX**9. Other Activities to be carried out during the year 2023-24:****✓ CSRTI, Pampore****❖ Maintenance of temperate mulberry germplasm, mother culture and demonstration plots**

- Maintenance of mulberry garden, supply leaf/shoot for in-house rearing.
- Maintenance 88 mulberry germplasm
- Multiply and supply of mulberry cuttings / saplings.
- Raising nursery through cuttings and seeds.
- Monitoring diseases in plantations at 15 locations.
- Maintenance demonstration plot
- Maintenance breeders' plot
- Nutrient Analysis of Soils And Mulberry Under Temperate Conditions

❖ Maintenance of silkworm germplasm

- Maintenance of Breeders stock of silkworm breeds
- Maintenance 111 exotic and indigenous silkworm races
- Trial of Light Trap for controlling *Glyphodes pyloalis*

✓ RSRS, Jammu**❖ Maintenance of subtropical mulberry germplasm, mother culture and demonstration plots**

- Maintenance of mulberry garden, supply leaf/shoot for in-house rearing.
- Maintenance subtropical mulberry germplasm
- Multiply and supply of mulberry cuttings / saplings.
- Raised nursery through cuttings and seeds.

❖ Maintenance of silkworm germplasm

- Maintenance of Breeders stock of silkworm breeds
- Maintenance silkworm races

❖ Demonstration of technologies: Crop protection measures, development of demonstration plots on Agro based mulberry plantation, intercropping etc.,

✓ **RSRS, Sahasapur**

- ❖ Maintenance of subtropical mulberry germplasm, mother culture and demonstration plots
 - Maintenance of mulberry garden, supply leaf/shoot for in-house rearing.
 - Maintenance subtropical mulberry germplasm
 - Maintenance and supply of mulberry cuttings / saplings.
 - Raising nursery through cuttings and seeds.
- ❖ Maintenance of silkworm germplasm
 - Maintenance of Breeders stock of silkworm breeds
 - Maintenance silkworm races

✓ **P\$-BSF, Manasbal**

- ❖ Maintenance of subtropical mulberry germplasm, mother culture and demonstration plots
- ❖ Maintenance of silkworm germplasm
 - Maintenance 13 bivoltine silkworm races
 - Maintenance parental stock (P2) and supply silkworm seed.
 - Maintenance 83 genotypes of temperate mulberry germplasm bank. [TMGB]
- ❖ Maintenance of general plantation / chawki garden.

✓ **Post Cocoon Technology Section of CSRTI, Pampore:**

- ❖ **Cocoon Testing & Reeling:** Assessment and testing of cocoon samples, collected from the cocoon markets of the Kashmir region and R&D projects CSR&TI's SBG Division, Extension section and P4 Manasbal etc will be undertaken during the year. The section will try to assess and test around 600 cocoon samples, out of which 150 samples will be collected from different auction markets and rest are expected to be received from different sections/units of CSR&TI.
- ❖ **Raw Silk Testing:** Testing of the raw silk samples, collected/ received from different functional reeling units of the valley will be conducted during the year..
- ❖ To demonstrate the post cocoon Technologies among the stakeholders, and for improvement of cocoons/ raw silk, DOT programmes will be conducted in different cocoon markets.
- ❖ **SMOI work:** The Srinagar chapter of the SMOI has mandated activities/targets set by the CSTRI, Bangalore, like enrollment of Members, Sale of labels, conduct of awareness programmes, raining of sales persons, collection of subscription for the Silk Mark magazine.
- ❖ **Pre-shipment Inspection of silk goods meant for exports:** As the inspection work is need based and demand dependent, the section will try to provide quick and timely services of inspection without any delay to the exporters, who approach the office on voluntarily basis

Annex -3.X**10. Revenue Generation during the year 2023-24****(Rs. In lakhs)**

#	Source of Revenue Generation	Physical (No.)	Revenue to be generated
10.1	Patent (Technology)		
10.1.1	License Fee collected		
10.1.2	Royalty collected		
10.2	Testing & Analytical charges (Sample)		
10.2.1	Testing of Soil/water/FYM/ Leaf etc	Need based	
10.2.2	Quality analysis/ testing of products	Need based	
10.2.3	Testing of cocoons/silk yarn/fabric etc.	Need based	
10.3	Consultancy (Services)		-
10.4	Supply/ sale proceeds of cutting / Sapling/ seedling/ chawki worms/ cocoons/ Silk etc.		
10.4.1	Mulberry cutting/Saplings		1.00
10.4.2	Vanya host plant sapling/ seedling		
10.4.3	Mulberry chawki worms		
10.4.4	Mulberry seed(DFLs)		
10.4.5	Vanya DFLs		
10.4.6	Cocoons		5.00
10.4.7	Output from R&D Projects (Silk, fabric etc)		1.00
10.4.8	Sale of Intercrop/license fee of quarter		7.00
	Total		14.00