Action Plan
2017-18

Physical Target for the year 2017-18

Central Muga Eri Research & Training Institute
Lahdoigarh, Jorhat

Annexure-6

Physical target for year 2017-18 of CMER&TI Ladoigarh

1. Organisational set up- Nested units

Unit	Place
RSRS/RMRS/RTRS	RMRS at Boko; RSRS at Mendipathar and Shadnagar
REC	Lakhimpur, Diphu, Fatehpur, Coochbehar, Tura, Balijan
Sub REC	Kokrajhar

2. Projects:

ITEM	Target	Remarks
1. Projects		
1.1 Projects of earlier year continued through the year 2017-18	12	**Annex 6.I**
1.2 Projects concluded during the year 2017-18	5	**Annex 6.II**
1.3 New Projects initiated during 2017-18	7	**Annex 6.III**
2. Extension communication programs (No.)		Annex 6. IV
2.1. Farmers meet cum exhibition/ Krishi Mela	3	
2.2. Field day	18	
2.3. Farmers day	18	
2.4. Awareness programme	21	
2.5. Vichar Gosthi/Group discussion	42	
2.6. Workshop / Seminar	2	
3. Transfer of Technology (No. of technologies to be given in parenthesis)	44 (17)	Annex 6.V
4. No. of Training conducted (No. of persons trained to be given in parenthesis)	57 (2370)	Annex 6.VI
5. Digital Soil Health Card issued	800	Annexure 6.VII
6. Publicity / Print Literature / Films/ Videos **Annexure 6.VIII**		
6.1. Periodicals	6	
6.2. Publications	55	
6.3. Extension literature	2	
6.4. Films/ Videos	5	

Annex 6.I

2.1.1. Projects of earlier year to be continued during 2017-18

Sl. No.	Code	Title	Start	Closure	Milestone to be crossed				Financial target (Rs. In lakhs)
					I Qtr	II Qtr	III Qtr	IV QTR	
At main institute									
1	AIT-5872	Whole Genome Sequencing and functional genomics of Golden Silk Moth *Antheraea assamensis*	Nov., 2015	Oct., 2018	Collection of silkworm samples and DNA extraction; homozygosity test within population; prototypes identification based on heterozygosity/ divergence in phenotypes, silk quality/ immunocompetence.	Collection of individual tissues from different tissues of muga silkworm for transcriptome analysis.	Collection of individual tissues from infected and control larvae, extraction of RNA and RNA sequencing	Assembly of RNA sequences and functional annotation; Quantitative Expression and validation by Real Time PCR	Transport & =0.60 Contingency =2.50 Other=1.00 Total =4.10 lakhs
2	MOE-5875	Effect of plant protection formulations on the growth, development and productivity of Muga Silkworm, *Antheraea assamensis* Helfer (Saturniidae: Lepidoptera).	April, 2016	March, 2019	Laboratory studies on the effects of commonly used insecticides on the growth and development of the muga silkworm.	Laboratory studies on the effects of commonly used insecticides on physiological and biochemical composition in the muga silkworm	Laboratory studies on the effects of commonly used insecticides on physiological and biochemical composition in the muga silkworm	Standardization / development of suitable methodologies / procedures to reduce the effect of pesticides	Wages = 1.50 Transport =0.25 Contingency =5.50 Other=2.65 Total=8.90 lakhs
3	ARP 5874	Development of Decision Support System for early	April, 2016	March, 2019	Survey and collection of field data Large scale mapping of landscap	Survey and collection of field data Large scale	In-situ measurement of physical parameters and	measurement of physical parameters and weather	Travel=1.50 Contingency= 0.75 Consumable=0.8

		warning of selected muga silkworm diseases & pests with geospatial technique				mapping of landscap	weather variable Recording the disease and pests incidence	variable Recording the disease and pests incidence	0 Others=1.00 Total=4.05 lakhs
4	APR 5877	Role of hormesis in mitigating oxidative stress and its impact on growth and yield of Muga silkworm, *Antheraea assamensis* Helfer	Sept., 2016	Aug, 2019	Heat treatment to different development stages of *Antheraea assamensis* in Jarua & Chatua crop. Different developmentactivities like survivability of eggs by hatching, ability of larvae to spin healthy cocoons, Successive emergence of adult by pupa, successful copulation and egg lying capacity will be observed. On the other side, after rearing performance, cocoon parameters will be analysed	Heat treatment to different development stages of *Antheraea assamensis* in Jethua & Aherua crop crop. Different development activities like survivability of eggs by hatching, ability of larvae to spin healthy cocoons, Successive emergence of adult by pupa, successful copulation and egg lying capacity will be observed. On the other side, after rearing performance, cocoon parameters will be analysed	Heat treatment to different development stages of *Antheraea assamensis* in Bhodia & Kotia crop. Different development activities like survivability of eggs by hatching, ability of larvae to spin healthy cocoons, Successive emergence of adult by pupa, successful copulation and egg lying capacity will be observed. On the other side, after rearing performance, cocoon parameters will also be analysed	Estimation of oxidative stress and antioxidant levels in *Antheraea assamensis* from kotia crop	Transport =0.25 Contingency =0.50 Consumables=3. 60 Total=4.35 lakhs

5	ARP 5878	Next generation sequencing studies and bioinformatics analysis of microbiome of flacherie infected *Antheraea assamensis* Helfer for developing effective disease control measures	Sept., 2016	August , 2019	Filed trails of newly developed disinfectant for efficacy analysis Pathogenic bacterial growth curve analysis with newly developed formulation for controlling flacherie disease	Extraction of microbiome of flacherie infected silkworm by using different methods	Next generation sequencing studies 16S rRNA gene characterization of cultivable pathogenic bacteria isolated from flacherie infected muga silkworm	Analysis of next generation sequencing data b using various data mining tools for determining abundance of pathogenic bacteria during flacherie disease	Transport = 0.30 Contingency = 7.25 Other= 0.80 Total = 8.35 lakhs
6	PPA 5879	Assessment of phytochemical diversity in Som (*Persea bombycina* Kost), the primary host plant of *Antheraea assamensis* Helfer from Northeast India	Sept., 2016	August 2019	Survey and collection of primary data on the existing plantations of *P. bombycina* in different location.	Collection of soil (field) and leaf (*P. bombycina*) samples from three locations and recording of morphological/meteorological data	Morphological data sheet / descriptor preparation	Analysis of physico-chemical properties of soil, and Quantitative analysis of phytochemical constituents	Wages = 1.00 Transport = 0.50 Contingency = 0.50 Other = 7.20 Total = 9.20 lakhs
7	PRP-5880	Characterization and efficacy of bacterial antagonists against *Alternaria ricini* infecting Castor in North-eastern India	Sept., 2016	August 2019	Dual Culture Bioassay to evaluate the efficacy of bacterial antagonists against *Alternaria ricini*.	Dual Culture Bioassay to evaluate the efficacy of bacterial antagonists against *Alternaria ricini*.	Biochemical characterization of bacterial antagonists and identification of effective bacterial antagonists using 16S rRNA gene.	Mass multiplication and Development of bio-formulation for the control of *Alternaria ricini*.	Transport = 0.25 Contingency = 0.50 Other= 9.00 Total = 9.75 lakhs

8	APS 5881	Development of suitable incubation device of Eri silkworm to overcome hatching problem during summer	Sept., 2016	Aug., 2019	Incubation of eri eggs in different incubation devices (summer only)	Bioassay of incubated eggs	Recording of incubation data in Autumn season with existing practices	Incubation of eri eggs in different incubation devices in RERS/RECs/	Wages =0.48 Transport =0.20 Contingency =0.80 Equipment =1.16 Total=2.64 lakhs
9	APR 5882	Validation of Indigenous Technical Knowledge (ITK) associated in muga silkworm seed production	Sept., 2016	Aug., 2019	Validation of the selected ITKs through conducting grainage and rearing at the REC, Lakhimpur and CMER&TI, during Apr-May 2017	Validation of the selected ITKs through conducting grainage and rearing and evaluation of crop performance of ITK integrated with the existing recommended package of practices at REC, Lakhimpur during the crop season Aug-Sep 2017	Validation of the selected ITKs through conducting grainage and rearing and evaluation of crop performance of ITK integrated with the existing recommended package of practices at REC, Lakhimpur during the crop season Oct-Nov 2017.	Evaluation of crop performance of ITK integrated with the existing recommended package of practices at REC, Lakhimpur during the crop season Feb-Mar 2018	Wages =1.10 lakh Travels=0.50 lakh Contingency=0.50 lakh Other= 2.05 lakh Total = 4.15 lakhs
10	AIT 5885	Development of microbial biocatalyst by heterologous expression of *hpaC* & *soxABC g*ene cluster in biosurfactant producing bacterium for	July 2016	June 2019	Soil sampling in oil polluted areas near by Som plantations Characterization of biosurfactant producing bacteria	Genomic DNA extraction, PCR and molecular characterization of biosurfactant producing bacteria	Plasmid DNA extractions and gene manipulation studies with PCR	Plasmid DNA extractions and gene manipulation studies with PCR	Fellowship = 3.3 Transport & = 0.30 Contingency = 4.48 Other= 0.50 Total = 8.58 lakhs

		effective desulfurization of dibenzothiophene							
11	AIT 5876	Establishment of Institutional Biotech Hub (DBT funded project)	Nov., 2011	March 2019	Organization of workshop and awareness programme Regular research activities of the section	Regular research activities of the section	Sensitization of the school/college students through different outreach programmes Regular research activities of the section	Organization of workshop and awareness programme Regular research activities of the section	Total = 5.0 lakhs
12		Forecasting and forewarning for pest and diseases of muga host plants and silkworm (CSB)			Survey and Collection of Data at monthly intervals and updating the forewarning calendar for diseases and pest s.	Identify the disease occurrence in advance & forewarn the beneficiaries with remedial measures trough awareness programme	Survey and Collection of Data at monthly intervals and updating the forewarning calendar for diseases and pest s.	Identify the disease occurrence in advance & forewarn the beneficiaries with remedial measures trough awareness programme	Total= 4.00 lacks
At nested units									

Annex- 6. II

2.1.2. Projects continued through and to be concluded during 2017 – 18

Sl. No	Code	Title	Start	Closure	Milestone to be crossed				Financial budget (Rs. In lakhs)
					I Qtr	II Qtr	III Qtr	IV QTR	
At main institute									
1	AIB-5879	Development of suitable combinations /hybrids of eri silkworm with sustainable performance for commercial exploitation.	Nov., 2014	Oct., 2017	Study of performance of evolved cross (s) on primary food plants (Castor and Kesseru) at farmers' and institute level.	Field trial of better combinations/hybrids at farmers' level.	Field trial of better combinations/hybrids at farmers' level.	-	Transport = 0.30 Contingency = 0.60 Equipment: 0.50 Total= 1.40 lakhs
2	ARP 5867	Characterization, transmission and cyto-pathology of infectious flacherie and cytoplasmic polyhedrosis virus in muga silkworm, *Antheraea assamensis* Helfer (funded by DBT, New Delhi).	July 2013	June 2016	Isolation of disease cadavers and monitoring of the disease Seasonal occurrence of the disease	Isolation of total RNA from disease cadavers and PCR analysis Seasonal occurrence of the disease	Electro Microscopic analysis of Viral particles Transmission pattern of viral participles Seasonal occurrence of the disease	Electro Microscopic analysis of Viral particles Transmission pattern of viral participles Seasonal occurrence of the disease	DBT funded project
3	ARP 5868	Isolation and characterization of anti fungal peptides from muga silkworm *Antheraea assamensis* Helfer	April 2014	April 2017	Biochemical characterization of peptides by MALDI-TOF mass spectrometry, LC-MS-MS and the determination	DNA binding assay, membrane damage and hemolytic assay and cell viability assay etc.	Concluded		Fellowship = 0.80 Wages =0.20 Transport = 0.20 Contingency =0.30 Total=1.50 Lakhs

					of mechanism of action antifungal peptides by spectrofluorometer				
4	MOT 5883	Impact of Training on Knowledge and Adoption Level of Improved Technologies of Muga Culture	Sept. 2016	March 2018	Survey and data collection of Sivasagar and Dibrugarh	Survey and data collection of Goalpara and Kamrup	Survey and data collection of Lakhimpur and Golaghat	Statistical analysis and submission of report	Transport=0.85 Contingency=0.5 Other=1.5 Total =2.85 lakhs
5	PPS 5884	Soil health cards for sericulture farmers of Assam, Meghalaya, Manipur, Mizoram, Tripura, Nagaland, Arunachal Pradesh and Sikkim	Sept. 2016	August 2019	Collection of 200 Soil samples, analysis of nutrient status, fertilizer recommendation and development of Soil Health card covering different states	Collection of 200 Soil samples, analysis of nutrient status, fertilizer recommendation and development of Soil Health card covering different states	Collection of 200 Soil samples, analysis of nutrient status, fertilizer recommendation and development of Soil Health card covering different states	Collection of 200 Soil samples, analysis of nutrient status, fertilizer recommendation and development of Soil Health card covering different states	Equipments= 13.45 lakh Consumables and others = 3.00 lakh Travel:=2.00 lakh Contingency= 0.20 lakh Total = 18.65 lakh
Pilot study									
1		Standardization & Popularization of Treated Bamboo Products in Eri culture	July 2016	June 2017	Study on impact of bamboo treatment on Eri silkworms Selection of entrepreneurs Supply of treated mountages.	Training of entrepreneurs Production of improved mountages by treated bamboo	Mass production of bamboo appliances other than mountage	Mass production of bamboo appliances other than mountage Demonstration and supply of treated bamboo	Equipment= 15.00 Consumables= 1.00 Travel=0.50 Contingency =0.20 Fellowship=0.96 Total= 17.66 lakhs

								appliances.	
2		Assessment of Bio-chemical Properties and Nutritional Composition of Muga Silkworm (*Antheraea assamensis* Helfer) Litter	Septe mber 2016	August 2017	Laboratory analysis and preservation of litter. Chemical analysis of the litter	Laboratory analysis and preservation of litter. Chemical analysis of the litter	Microbial diversity study viz., beneficial microflora Pathogen diversity: Various pathogen compositions will be analysed.	Microbial diversity study viz., beneficial microflora Pathogen diversity: Various pathogen compositions will be analysed.	Contingency = 1.2 Total= 1.2 lakhs
3		Effect of liquid organic manures on quantitative & qualitative parameters of castor (*Ricinus communis* Linn.) leaves towards sustainable Eri cocoon production	Septe mber 2016	August 2017	Preparation of liquid organic manures (Panchagavya, Jeevamruth and Beejamrut) as per the standard protocols and fermentation methods.	Analysis of Nutrient status and microbial analysis of different organic liquid manures. Soil and foliar application of liquid organic manures to the host plant at different seasons.	Study on leaf growth, yield and quality parameters of the castor plant. Soil chemical analysis (Before and after intervention).	Bio-chemical analysis of castor leaves (Before and after intervention).	Contingency = 1.2 Total= 1.2 lakhs
At nested units									

Annex- 6.III

2.1.3. New projects to be initiated during 2017-18

Sl. No.	Code	Title	Start	Closure	Objectives	Expected outcome	Budget (Rs. In lakhs)
Main Institute							
1	-	Isolation and characterization of lytic bacteriophages	April 2017	March 2020	Isolation and characterization of potential bacteriophages against muga silkworm bacterial	Targeted phages will be identified which will provide unique information of phage genome	DST Fund

		infecting bacterial pathogens of *muga* silkworm, *Antheraea assamensis* Helfer (DST funded project)			pathogens Study of the phage biology and genome organization Evaluation of the potential phages cocktail against muga silkworm pathogens	biology and they will be used to make a formulation of a phage cocktail after trials and evaluation, which is expected to be useful to control the bacterial flacherie of muga silkworm. .	
2		Studies on the cross transmission of pebrine spores from lepidopteran caterpillars to muga silkworm (*Antheraea assamensis*, Helfer) and its control measures	June 2017	May 2020	To study the lepidopteran caterpillars fauna of muga ecosystem To study the pebrine infection in Lepidopteran caterpillars. Characterization of pebrine spores through illustrated taxonomic features and molecular tools To control the identified pebrine infected Lepidopteran caterpillar from muga ecosystem	From this study, we will be able to identify lepidopteran insects which are taking role of cross transmission of pebrine spores to muga silkworm. Therefore, this study will enable muga rearers to undertake preventive measures by controlling or screening out identified lepidopteran insects from the muga ecosystem. This will eventually decrease crop loss and will help to increase the benefit of muga rearing.	Total=5.00 lakhs
3		Studies on population dynamics, biology and control measures of muga silkworm predators, *Sycanus collaris* Fab. and *Eocanthecona furcellata* Wolff	June 2017	May 2020	To study the seasonal occurrence, population dynamics and biology of two important predators of muga silkworm, *Sycanus collaris* Fab. and *Eocanthecona furcellata* Wolff and their eco-friendly control measures.	This study will enable to understand the population and biology of the reduviid bug, *S. collaris* and *E. furcellata*; also extent of damage caused in muga silkworm rearing. Further, the control measures for these insect pests will be worked out through IPM practices; ultimately, the muga cocoon productivity will be increased.	Total=5.00 lakhs
4		Evaluation of muga and eri silkworm pupae oil as a potential source of non-conventional energy: Biodiesel (in collaboration with	April 2017	March 2020	To evaluation of muga and eri silkworm pupae oil as a potential source of non-conventional energy	Pupae oil will extracted from the pupae and will evaluated for their use a bio- diesel	Total = 2.50 lakhs

		NEIST Jorhat)					
5		Impact assessment of petroleum crude oil on Muga silkworm and their host plants in Assam	April 2017	March 2020	To study the effect of petroleum crude oil on Muga silkworm and their host plants in Assam	The effect of petroleum crude oil on Muga silkworm and their host plants in Assam will be evaluated and understand its impact.	Total = 1.20 lakhs
6		Biodiversity assessment of wild silkmoths and rearing potentialities of muga (*Antheraea assamensis* Helfer) and eri silkworm (*Samia ricini* Donovan) for sustainable development in Nagaland.	April 2017-	March 2020	Biodiversity assessment of wild silk moths collected from Nagaland. Rearing potentialities of wild muga (*Antheraea assamensis* Helfer) and eri silkworm (*Samia ricini* Donovan) for commercial utilization	Documentation of wild silk moths and exploitation for commercial utilization	Total = 6.20 lakhs
7		Improvement of Muga cocooning through technology intervention and refinement of crop schedule in Terai region of West Bengal	April 2017-	March 2020	Improvement of Muga cocooning through technology intervention and refinement of crop schedule in Terai region of West Bengal	Standardization of cocooning device as per crop schedule in Terai region of West Bengal	Total = 2.20 lakhs (to be confirmed)
At nested units							
9		Socio-economic upliftment of farmers through adoption of improved technologies and skill development in Eri culture	June 2017	May 2018	To adopt improved technologies (both pre and post cocoon sectors) at farmers' level. Promotion of organic farming through waste management in eri-culture. To improved the economies of scale through group approach Diversification of eri-culture towards income and employment generation.	Survey and Participatory rural appraisal, Diagnostic study.	Total = 10.612 Lakhs
						Grand Total (Annexure 6.I, II & III)	**221.771**

Annex- IV

3. Extension Communication Programmes to be conducted during 2017-18

Programmes	Annual Target												Persons to be sensitized	Budget (Rs. In lakh)
	No. of events													
	April	May	June	July	Aug	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March		
Farmers meet / Krishi Mela = 3													**900**	**5.00**
CMERTI										1			500	3.00
RMRS, Boko									1				200	1.00
RERS, Mendipathar								1					200	1.00
Field days (@ Rs.0.15/event) =18													**1800**	**2.70**
CMERTI		1						1					200	0.30
RMRS, Boko			1					1					200	0.30
RERS, Shadnagar				1					1				200	0.30
RERS, Mendipathar		1						1					200	0.30
REC, Diphu							1						100	0.15
REC, Lakhimpur			1					1					200	0.30
REC, Tura							1						100	0.15
REC, Kokrajhar		1						1					200	0.30
REC, Coochbehar			1					1					200	0.30
REC, Fatehpur							1						100	0.15
REC, Balijan							1						100	0.15
Farmers days(@ Rs.0.02/event)=18													**450**	**0.36**
CMERTI			1				1						50	0.04
RMRS, Boko		1				1							50	0.04
RERS, Shad				1				1					50	0.04
RERS, Mendi			1				1						50	0.04
REC, Diphu							1						25	0.02
REC, Lakhimpur		1						1					50	0.04
REC, Tura		1						1					50	0.04
REC, Kokrajhar						1							25	0.02
REC, Coochbehar		1						1					50	0.04
REC, Fatehpur						1							25	0.02

REC, Balijan							1						25	0.02
Awareness programmes (@ Rs.0.15/event)=21													**2100**	**3.15**
CMERTI		1		1		1		1					400	0.60
RMRS, Boko			1				1						200	0.30
RERS, Shadnagar			1					1					200	0.30
RERS, Mendipathar		1						1					200	0.30
REC, Diphu			1										100	0.15
REC, Lakhimpur		1						1					200	0.30
REC, Tura		1											100	0.15
REC, Kokrajhar			1					1					200	0.30
REC, Coochbehar			1					1					200	0.30
REC, Fatehpur			1						1				200	0.30
REC, Balijan										1			100	0.15
Vichar Gosthi/ Group discussion (@ Rs.0.01/event)=42													**840**	**0.42**
CMERTI			2	1	2		1			2	2		200	0.10
RMRS, Boko			2		2		1						100	0.05
RERS, Shadnagar			2			1			2				100	0.05
RERS, Mendipathar				2		1		2					100	0.05
REC, Diphu			1		1								40	0.02
REC, Lakhimpur			1		2					1	1		100	0.05
REC, Tura		1								1			40	0.02
REC, Kokrajhar			1			1							40	0.02
REC, Coochbehar			1						1				40	0.02
REC, Fatehpur				1				1					40	0.02
REC, Balijan			1						1				40	0.02
Workshop / Seminar (@ Rs.2.50/event)=2														**5.00**
CMER&TI										1				2.50
RMRS, Boko								1						2.50
													Total	**16.63**

Annex-6. V

3. Transfer of Technology to be conducted during 2017-18

Front line technology demonstration

Sl. No	TOT Activity (Name)	Number of programmes	Farmers covered (No.)	Budget (Rs. In lakh)
1	**Integrated technology of Muga culture**	20	500	0.40
	1. Pruning/pollarding of host plants			
	2. Input application to the host plants and green manuring			
	3. Pest and disease management of host plants			
	4. Disinfection of rearing fields			
	5. Early stage rearing of muga silkworm			
	6. Prophylactic measures against pest and diseases of muga silk worms			
	7. Improved box type mountage			
2	**Integrated technology of Eri culture**	20	500	0.40
	1. Agronomical practices of castor			
	2. Agronomical practices of kesseru			
	3. Improved eri silkworm breed (C2)			
	4. Early stage rearing of eri silkworm			
	5. Wooden split type collapsible mountage			
	6. Disinfection of rearing appliances and rearing house			
	7. Platform rearing techniques of eri silkworms.			
3	**Post cocoon technology**	04	100	0.08
	1. Sorting, boiling and drying of cocoon			
	2. Motorized Eri Spinning Machine			
	3. Natural dying of eri yarn			
Total			**1100**	**0.88**

Annex –6. VI

1. Training / Human Resource Development to be carried during 2017-18

Sl. No.	Training / Course	Target (Rs. In lakhs)	
		Physical	**Financial**
1	**Specialised Overseas Training / Exposure visit** (Scientists requiring specific / project related training / exposure can be proposed under this Head indicating Specific area & location of training and Passport details)		
2	**Management Development Programme** (Officers and staffs can be plugged in useful programme organized by reputed Institutions with prior approval of Competent Authority)		1.00
3	**Training Impact Assessment** (Study / Survey plans for assessing the training impact can be proposed under this component)		1.00
4	**Training Capex** (Training equipments such as white board, projector, screen, Computer / Laptop, Camera P.A. System etc)		24.50
5	**Special Initiatives**		
5.1.	**Sericulture Resource Centre (SRC)** (No. of SRC to be established giving details of location and No. of farmers to be trained)	1 SRC Existing 8 SRCs (2015-17-16) New SRC proposed: 1 at Kamargaon, Golaghat. Persons to be trained :500 (Including 4 SRCs established during 2016-17)	4.25
5.2.	**Seri Buisness Incubators** (for Vanya silk reeling and spinning. Space to be provided by the concerned Institute for housing seric business incubators to be utilized by potential entrepreneurs by paying a fixed rent for initiating micro enterprise)	1	25.00
6	**Training under R&D**		
6.1.	**Structured Training Course**		
6.1.1	**A**. **PGDS** (Estimated expenditure to be incurred under heads - Faculty honorarium, Examination / Evaluation expenditure, Expenditure towards escorts for field visit etc to be indicated during 2017-18)	-	-
6.1.2	**B**. **Intensive Training** (More than 30 days duration)		
6.2	**Farmers Skill Training** (Training batches can be planned from 2 to 15 days duration under this head)		

	Rs. 0.02 lakh /person for 3 days programme	5 batch (250 farmers)	5.00
	Rs. 0.03 lakh /person for 5 days programme	8 batch (400 farmers)	12.00
	Rs. 0.055 lakh /person for 10 days programme	5 batch (150 farmers)	8.25
6.3	**Exposure visit for technology awareness** (1 to 5 day Exposure visit cab be proposed under this head)	200 (5 batch)	5.00
	Tech. Orientation Programme (Batches can be planned for non- farmers particiapnts for Technology based training)	5 batch (150 farmers)	7.50
6.4.	**Training under Post cocoon sector** (All Post cocoon related training can be indicated under this head separately for industry stake holders and sericulture officials/NGOs)	150 (5 batch)	4.50
6.5	**Information Education & communication (IEC)** - [Proposal can be sent for preparation of instructional videos, documentary / films, publication of books / brochures and other publicity materials proposed during 2017-18]		2.25
6.6.	Training Programme utilizing **other CSB Funds** (other than CBT)- Training under Seed Act., Swacch Reshom Gram, etc.	4 batch	350
6.7	Training Programme utilizing **Non CSB Funds** (DOS, NERTPS etc)		
		Total	**77.75**

Annex –6.VII

6. Digital Soil Health Card issued during 2017-18

Sl. No.	Name of state	Target		Financial requirement (Rs. In lakh)
		Muga	Eri	
1	Assam (including BTC)	160	170	5.20
2	Arunachal Pradesh	30	30	
3	Meghalaya	60	50	
4	Manipur	30	50	
5	Mizoram	40	30	
6	Nagaland	45	60	
7	Sikkim	10	10	
8	Tripura	25	0	
	Total	**400**	**400**	**5.20**

Annexure 6.VIII

7. Information, education and communication

Sl. No.	Item	Target (No.)	Budget (Rs. In lakh)
1	**Periodicals**		
	Annual Report	1	0.50
	CMERTI Sericulture News	2	0.30
	Hindi News Letter	2	0.30
	E-News Letter	1	0.00
2	**Publications**		
	Journal papers	20	1.00
	Conference papers	10	1.00
	Booklets	5	1.00
	Popular articles	10	0.00
	Leaflets	10	1.00
3	**Extension literature**	2	0.50
4	**Films/ Videos** (including extension programmes)	5	0.50
	Total	**68**	**6.10**

8. Cluster Promotion Programme - Nil

9. Seri Model Village Programme (2017-18)

Muga and eri culture is a traditional and age old practice and sustaining amidst the rural populace. In the recent past, various technologies were recommended for enhancing production in muga and eri culture. Keeping in view of the above, CMER&TI, Lahdoigarh is being implemented 4 muga and 4 eri Seri Model Villages covering 100 beneficiaries in each village and one PCT village covering 62 beneficiaries during XII Plan (From 2014-15) for disseminating the integrated technology package to the farmers' field through demonstration, organization of awareness programme, field day, training, etc. Further, need based critical items also arranged for providing to the beneficiaries for encouraging to quick adoption of technologies. Adoption of technologies are found encouraging in all the SMV. Cumulative impact assessment from the rearing performance of 2016-17, resulting that level of cocoon production is enhanced by 21.2 % in seed crop and 26.5 % in commercial crops in Muga SMVs. Similarly, cocoon production is enhanced by 40.0% in Eri SMVs. Improvement of cocoon production, also resulting enhancement of raw silk production and higher income generation among the farmers covered under SMVs. Further, implementing the Eri PCT SMV in last two years, it has recorded that the traditional method of eri spinning (Takli) has shifted to Pedal cum Motorized eri spinning machines among 62 beneficiaries covered under the SMV. Adopting the improved eri spinning technology by the beneficiaries, production of eri spun yarn has increased up to 100-120 gm

from the benchmark production of 30-40 gm per day per person. Similarly, annual income of the beneficiaries from eri post cocoon activities has been increased up to Rs. 16,000/ to 30,000/- against the benchmark Rs. 6,000/- to 22,000/- per annum.

Hence, it is proposed to continue all the 9 existing Seri Model Villages s for the year 2016-17 for further improvement of muga and eri cocoons as well as raw silk production in both qualitatively and quantitatively through providing need based technological supports to the farmers with the following objectives.

Objectives

- To make aware the improved technologies of muga and eri culture to the farmers.
- To improve the production of muga and eri culture through adoption of improved technology package.

List of the technologies identified for integration in to technology package

A. Muga culture

- Pruning/pollarding of host plants
- Input application to the host plants and green manuring
- Pest and disease management of host plants
- Disinfection of rearing fields
- Early stage rearing of muga silkworm
- Prophylactic measures against pest and diseases of muga silk worms
- Improved mountage for spinning of cocoons.

B. Eri culture

- Raising of high yielding castor variety
- Agronomical practices of kesseru
- Disinfection of rearing appliances and rearing house
- Improved eri silkworm breed (C2)
- Early stage rearing of eri silkworm
- Platform rearing techniques of eri silkworms.

C. Eri PCT

- Sorting, boiling and drying of cocoon
- Motorized Eri Spinning Machine
- Natural dying of eri yarn

Name of the Seri Model Villages and Nodal Officers Enclosed in **Annexure – I**
Estimated Budget: **Rs. 28.23 lakhs (Details are given in Annexure-II**)
Outcome of the programme

1. Implementing the Seri Model Villages, it is estimated to produce 2.40 MT muga raw silk and 3.84 MT Eri raw silk during 2017-18.
2. Estimated turnout of Muga Seri Model Villages is Rs. 140.00 lakh (from sale proceed of seed and commercial cocoons) and eri Seri Model Villages is Rs. 112.80 lakh (from sale proceed of pupae and cocoons shell).

Target of Dfls brushing and cocoon production in each Muga and Eri Seri Model Villages during 2017-18: Given in **Annexure –III & IV**

Mode of implementation:

- All the existing SMVs with 862 beneficiaries will management be continued under the programme.
- Technological supports for host plant, rearing of silkworms, silkworm seed production, etc will be continued through Awareness programme, Front line demonstrations, training, exposure visits, etc. Need based critical equipments, disinfectants, etc will be provided to the beneficiaries of Seri Model Villages under the programme.
- Silkworm crop will be conducted by the farmers of each Seri Model Villages as per schedule under regular technical guidance.
- Data on rearing performance will be collected from the farmers and will be reviewed after completion of every crop separately.
- Collected data will be analyzed and compared with the benchmark data to assess the sustainability and improvement over the benchmark.

10. Other Activities:

Schedule of Research Advisory Committee (RAC) and Research Council (RC) meetings

#	RAC/ RC meeting	Date	No. of meetings	Budget provision (Rs. In Lakhs)
1.	50th RC	June, 2017	1	0.30
2.	33rd RAC	August, 2017	1	2.00
3.	51st RC	December, 2017	1	0.30
4.	34th RAC	February, 2018	1	2.00
			Total	**4.60**

Other activities
A) Land use and resource conservation:

Plan for Land Use and Resource Conservation

#	Activities	Physical Target for 2017-18					Financial for 2017-18				
		Qtr-1	**Qtr-2**	**Qtr 3**	**Qtr-4**	**Total**	**Qtr-1**	**Qtr-2**	**Qtr 3**	**Qtr-4**	**Total**
A	**Raising of seedlings/ sapling (nos)**										
I	**Som / Soalu seedling (Raising cost cost Rs.3.00 per seedling in polybag)**										
1	CMER&TI, Lahdoigarh	50000	50000	0	0	100000	1.50	1.50	0	0	3.00
2	RMRS, Boko	50000	50000	0	0	100000	1.50	1.50	0	0	3.00
3	REC, Lakhimpur	5000	0	0	0	5000	0.15	0	0	0	0.15
4	REC, Coochbehar	5000	0	0	0	5000	0.15	0	0	0	0.15
5	REC, Tura	5000	0	0	0	5000	0.15	0	0	0	0.15
6	REC, Kokrajhar	5000	0	0	0	5000	0.15	0	0	0	0.15
	Sub Total (I)	**120000**	**100000**	**0**	**0**	**220000**	**3.60**	**3.0**	**0**	**0**	**6.60**
II	**Raising of Kesseru seedlings (Raising cost Rs.2.50 per seedling in polybag)**										
1	CMER&TI, Lahdoigarh	50000	0	0	0	**50000**	1.25	0	0	0	1.25
2	RERS, Mendipathar	20000	0	0	0	**20000**	0.50	0	0	0	0.50
3	REC, Kokrajhar	5000	0	0	0	**5000**	0.125	0	0	0	0.125
4	REC, Diphu	5000	0	0	0	**5000**	0.125	0	0	0	0.125
5	REC, Balijan	5000	0	0	0	**5000**	0.125	0	0	0	0.125
	Subt Total (II)	**85000**	0	0	0	**85000**	**2.125**	**0**	**0**	**0**	**2.125**
						Total (A)	**5.725**	**3.00**	**0**	**0**	**8.725**
B	**Supply of seedling / sapling**										
I	**Som / Soalu seedling @ Rs.3/- per seedling**										
1	CMER&TI, Lahdoigarh	5000	5000	0	0	**10000**	0	0	0	0	0
2	RMRS, Boko	10000	10000	0	0	**20000**	0	0	0	0	0
3	REC, Lakhimpur	2500	2500	0	0	**5000**	0	0	0	0	0

4	REC, Coochbehar	2500	2500	0	0	**5000**	0	0	0	0	0
	Sub Total	**20000**	**20000**	**0**	**0**	**40000**	**0**	**0**	**0**	**0**	**0**
II	**Kesseru seedling @ Rs. 3/- per seedling**										
1	CMER&TI, Lahdoigarh	5000	3000	0	0	**8000**	0	0	0	0	0
2	RERS, Mendipathar	5000	5000	0	0	**10000**	0	0	0	0	0
	Sub Total	**10000**	**8000**	**0**	**0**	**18000**	0	0	**0**	**0**	**0**
C	**Dfls brushing**										
I	**Muga Commercial crop (Cost @ Rs. 10/- per dfl)**										
1	CMER&TI, Lahdoigarh	1500	0	1500	0	**3000**	0.15	0	0.15	0	**0.30**
2	RMRS, Boko	1250	0	1250	0	**2500**	0.125	0	0.125	0	**0.25**
3	REC, Lakhimpur	250	0	250	0	**500**	0.025	0	0.025	0	**0.05**
4	REC, Coochbehar	250	0	250	0	**500**	0.025	0	0.025	0	**0.05**
5	REC, Kokrajhar	200	0	200	0	**400**	0.020	0	0.020	0	**0.04**
	Sub-Total (I)	**3450**	**0**	**3450**	**0**	**6900**	**0.345**	**0**	**0.345**	**0**	**0.69**
II	**Muga Seed crop (Cost @ Rs. 10/- per dfl)**										
1	CMER&TI, Lahdoigarh	250	600	250	600	**1700**	0.025	0.060	0.025	0.060	0.170
2	RMRS, Boko	150	200	200	150	**700**	0.015	0.020	0.020	0.015	0.070
3	REC, Tura	100	200	200	100	**600**	0.010	0.020	0.020	0.010	0.060
4	REC, Lakhimpur	0	200	0	200	**400**	0	0.020	0	0.020	0.040
5	REC, Coochbehar	100	200	200	100	**600**	0.010	0.020	0.020	0.010	0.060
	Sub-Total (II)	**600**	**1400**	**850**	**1150**	**4000**	**0.060**	**0.140**	**0.085**	**0.115**	**0.400**
III	**Eri (Cost @ Rs. 5.00/- per dfl)**										
1	CMER&TI, Lahdoigarh	75	75	75	75	**300**	0.0375	0.0375	0.0375	0.0375	0.015
2	RERS, Mendipathar	100	150	100	150	**500**	0.0500	0.0750	0.0500	0.0750	0.250
3	RERS Shadnagar	100	150	150	100	**500**	0.0500	0.0750	0.0750	0.0500	0.250
4	REC, Diphu	50	50	50	50	**200**	0.025	0.025	0.0250	0.0250	0.100
5	REC Fatehpur	0	0	100	100	**200**	0	0	0.0500	0.0500	0.010

6	REC, Kokrajhar	50	50	50	50	**200**	0.0250	0.0250	0.0250	0.0250	0.010
	Sub-Total (III)	**375**	**475**	**525**	**525**	**1900**	**0.1875**	**0.2375**	**0.2625**	**0.2625**	**0.635**
D	**Muga Commercial cocoon production (@ 60 cocoons/dfl)**										
1	CMER&TI, Lahdoigarh	90000	0	90000	0	**180000**	0	0	0	0	0
2	RMRS, Boko	75000	0	75000	0	**150000**	0	0	0	0	0
3	REC, Lakhimpur	15000	0	15000	0	**30000**	0	0	0	0	0
4	REC, Coochbehar	30000	0	30000	0	**60000**	0	0	0	0	0
5	REC, Kokrajhar	12000	0	12000	0	**24000**	0	0	0	0	0
	Sub-Total (D)	**222000**	**0**	**222000**	**0**	**444000**	0	0	0	0	0
E	**Muga Seed cocoon production @ 40 cocoons/ dfl**										
1	CMER&TI, Lahdoigarh	10000	24000	10000	24000	68000	0	0	0	0	0
2	RMRS, Boko	6000	8000	8000	6000	28000	0	0	0	0	0
3	REC, Tura	4000	8000	8000	4000	24000	0	0	0	0	0
4	REC, Lakhimpur	0	8000	0	8000	16000	0	0	0	0	0
5	REC, Coochbehar	4000	8000	8000	4000	24000	0	0	0	0	0
	Sub-Total (E)	**24000**	**56000**	**34000**	**46000**	**160000**	0	0	0	0	0

F	**Eri cocoon production @10.0 kg shell /100dfl**										
1	CMER&TI, Lahdoigarh	7.5	7.5	7.5	7.5	**30.0**	0	0	0	0	0
2	RERS, Mendipathar	10.0	15.0	10.0	15.0	**50.0**	0	0	0	0	0
3	RERS Shadnagar	10.0	15.0	15.0	10.0	**50.0**	0	0	0	0	0
4	REC, Diphu	5.0	5.0	5.0	5.0	**20.0**	0	0	0	0	0
5	REC Fatehpur	0.0	0.0	10.0	10.0	**20.0**	0	0	0	0	0
6	REC, Kokrajhar	5.0	5.0	5.0	5.0	**20.0**	0	0	0	0	0
	Sub-Total (F)	**37.5**	**47.5**	**52.5**	**52.5**	**190.0**	0	**0**	**0**	**0**	0

G	**Muga dfls production from 60% of cocoons generated from seed crop @ Cocoon : dfl is 3 :1 (g)**										
1	CMER&TI, Lahdoigarh	2000	4800	2000	4800	**13600**	0	0	0	0	0
2	RMRS, Boko	1000	2500	2500	1000	**7000**	0	0	0	0	0
3	REC, Tura	500	1500	1500	500	**4000**	0	0	0	0	0
4	REC, Lakhimpur	0	1200	0	1200	**2400**	0	0	0	0	0
5	REC, Coochbehar	500	1500	1500	500	**4000**	0	0	0	0	0
	Sub Total (G)	**4000**	**11500**	**7500**	**8000**	**31000**	0	0	0	0	0
H	**Eri dfl production from own source of seed cocoons @ Cocoon : dfl is 4 :1 (Nos)**										
1	CMER&TI, Lahdoigarh	1000	2000	2000	1000	**6000**	0	0	0	0	0
2	RERS, Mendipathar	2500	2500	2500	2500	**12000**	0	0	0	0	0
3	RERS Shadnagar	2000	2000	2000	2000	**8000**	0	0	0	0	0
4	REC, Diphu	1500	1500	1500	1500	**6000**	0	0	0	0	0
	Sub-Total (H)	**7000**	**8000**	**8000**	**7000**	**32000**	0	0	0	0	0
I	**Muga dfls supply @ Rs.10/- per dfl (g)**										
1	CMER&TI, Lahdoigarh	2000	4800	2000	4800	**13600**	0	**0**	**0**	**0**	0
2	RMRS, Boko	1000	2500	2500	1000	**7000**	0	0	0	0	0
3	REC, Tura	500	1500	1500	500	**4000**	0	0	0	0	0
4	REC, Lakhimpur	0	1200	0	1200	**2400**	0	0	0	0	0
5	REC, Coochbehar	500	1500	1500	500	**4000**	0	0	0	0	0
	Sub-Total (I)	**4000**	**11500**	**7500**	**8000**	**31000**	0	0	0	0	0
J	**Eri dfls supply @ Rs. 2.50/- per dfl (0.5g)**										
1	CMER&TI, Lahdoigarh	925	1925	1925	925	**5700**	0	**0**	**0**	**0**	0
2	RERS, Mendipathar	2400	2350	2400	2350	**11500**	0	**0**	**0**	**0**	0
3	RERS Shadnagar	1900	1850	1850	1900	**7500**	0	0	0	0	0
4	REC, Diphu	1450	1450	1450	1450	**5800**	0	0	0	0	0
	Sub-Total (J)	**6675**	**7575**	**7625**	**6625**	**30500**	0	0	0	0	0
	Grand Total						0	0	0	0	0
	Grand Total (Rs in Lakhs)						**6.3175**	**3.3775**	**0.6925**	**0.3775**	**10.450**

B. OTHER REQUIREMENT

EQUIREMENT AND OTHER ACCESSORIES

Equipment/other requirement	Quantity	Justification	Approx. price (Rs. in lakhs)
CMER&TI, Lahdoigarh			
Biotechnology Section			
BOD incubator	1	Under the project MOE-5875 and the new project for incubation of eggs	1.00
Moth examination table	2	For detection of pebrine to prepare dfls of muga silkworm	0.50
Iron racks for keeping seed cocoons in grainage	25	Required for keeping seed cocoons to produce dfls	5.00
Compound Light Microscope with LED light source	2	For detection of pebrine to prepare dfls of muga silkworm	4.00
Centrifuge (Model R23, Remi Make)	5	Required for centrifugation of moth samples to detect pebrine in mother moths by Fujiwara Method.	1.50
Power / diesel operated sprayer.	2	For spraying of disinfectant formulations on the trees of the farms	2.00
Grass cutter	3	For cutting grass at Farm No. 1, 2, 3 and Cinnamara	2.00
Oil operated pruning shaw	3	For pruning trees at Farm No. 1, 2, 3 and Cinnamara	1.00
Agarose Gel electrophoresis system	2	For detection of DNA under the project AIT – 5872 as the previously procured sets are very old and do not run due to wear and tear.	1.00
SDS Gel electrophoresis system	2	For detection of protein under the project AIT – 5872 as the previously procured sets are very old and do not run due to wear and tear.	1.00
Sonicator	1	For tissue homogenization	2.00
UPS System – 10 KVA	1	For ensuring continuous power supply in the new Grainage building	10.00
Portable pH meter	2	For determination of pH of soil and leaf sample	0.50
Bench top Tissue homogenizer	1	Equipment will be used for disintegrating tissues (plant/silkworm/bacteria) for DNA, protein, macromolecule extraction Section: Biotechnology, Pathology, Host plant	0.80

Water pump (power operated), pipes and other accessories, bore wells etc.	3	Installation of irrigation facilities at Farm No. 1, 2 and 3	7.50
Muga Silkworm improvement			
Water Bath	1	Utility for the project related work (Project code: APR 5877)	1.00
Micropipette	1	Utility for the project related work (Project code: APR 5877)	0.60
Muga Host Plant Improvement			
Spectrophotometer	1	To quantify and asses phytochemicals	5.00
Hot air oven	1	To process the samples	0.50
Silkworm Pathology			
-20^{o} Deep freezer	1	Under the project APR 5878, -20^{o}c deep freezer will be required for storing DNA, RNA, Insect samples. All the molecular biology reagents (Primers, DNTPs, Taq enzymes), enzymes, cloning kits will be stored at -20 deep fridge	1.00
Thermocycler (PCR Machine)	1	Required for genetic engineering and transcriptomic analysis. The PCR machine will strengthen the Pathology departmental infrastructure and facilitate the "state of the art level" laboratory with international standards (Under the project APR 5878 and AIT5885)	4.50
Microwave oven	1	Required for making gels for checking DNA, RNA and Restriction digestion preparations and useful for solubulising media components experiments/Preparations/Solvent extractions (Under the project APR 5878 and AIT-5885)	0.15
Agarose Gel electrophoresis unit (Big) and accessories	1	Under the project APR 5878. This instrument is required for analysis DNA, RNA and gene manipulation studies	2.00
NanoDrop	1	To quantify and asses the purity of samples such as nucleic acids and protein	6.00
Autoclave	1	Autoclave is to sterilize media and surgical instruments	1.00
RT- PCR		Qualitative and quantitative analysis and expression of gene which required in molecular biological work	20.00
Entomology Section			
Rearing Cage, Pheromones/ Biocontrollers, Binoculars, Insect trapping nets etc.	-	To conduct survey on population of Stink and Assassin bugs, trapping and rearing to study their life cycle, control measures theirof.	8.00

Leica microscope with digital camera	1	To examine pebrine spores and take pictures/videos of pebrine spores from different caterpillars of muga ecosystem	2.00
REM centrifugation machine (01)	1	To use in pebrine spore detection	2.40
Compound microscope (binocular) with electrical light source (02)	1	To observe pebrine spores	3.50
Soil Science & Agronomy Section			
Analytical balance	1	For measuring soil & leaf samples	0.60
GPS instrument with software	3	For measuring Longitude & Latitude of different locations	0.30
Flame photometer	1	For chemical analysis K content in soil samples	1.00
Atomic Absorption Spectrophotometer with UPS	1	For chemical analysis of micro nutrients in soil samples	10.00
Split Air Conditioner	1	For preserving chemicals, equipment and samples in optimum conditions	0.50
Computer and accessories	1	For data entry, calculation and documentation of different activities	0.45
Laptop & accessories	1	For data entry, calculation and documentation of different activities under SHC	0.45
Refrigerator	1	For preserving chemicals and samples in optimum conditions	0.15
Digital Camera	1	For documentation of Soil Health Cards	0.30
Chair with stand	2	For comfort analysis in laboratory	0.10
UPS System – 10 KVA	1	For ensuring continuous power supply	10.0
Post Cocoon Technology			
Digital Camera	1	For recording post cocoon activities in the section and farmers field	0.30
Perforated wooden Almirah	5	For storing cocoons in the section	1.00
Cocoon Cooking Device	3		0.30
Steel Almirah	1		0.20
Eri Section			
RCC building for eri seed laboratory including Moth testing lab, oviposition room, seed cocoon storage room with toilets.	1	For Eri seed Laboratory	80.00
Refrigerator	1	To keep cocoon	0.15

BOD incubator with humidity control system	1	To preserve seed cocoons	0.80
Furniture	-	Furnishings for seed laboratory. (lab. Desk, cabinet, tray, seating stool, steel almirah, Steel trunk of Eri seed Laboratory	4.50
Computer with windows 10 operating system, internet facility etc.)			0.50
Steel neted perforated almirah	1	To keep eri cut cocoons protecting from predators like rats.	0.20
Steel almirah	2	To keep office file & registers	0.20
UPS 3.5 KVA	1	Continuous power supply for BOD and other equipments	2.00
Power tiller	1	For land development as old one out of order in most of time.	8.00
Pump set & pipes for irrigation	1	For watering of food plants during winter	1.00
Tractor/ power tiller car shed	1	To keep Tractor/ power tiller & car	2.00
Motor cycle	1	For mobility of staff	1.00
Refrigerator, BOD & oven repairing		For expt. Work	1.50
Sprayer machine	1	For disinfection	0.15
Farm management			
FYM 4000 cft		Castor 2 acres, Kesseru 2 acres, Ailanthus= 2 acres and other GPB	0.40
Bamboo 200 nos		For green fencing construction	0.16
Vermicompost 3000 kg		Castor 2 acres, Kesseru 2 acres, Ailanthus= 2 acres and other GPB	0.30
PMC Section			
Xerox machine	1	For Xeroxing different documents	0.50
Godrej Almirah	2	For keeping books, leaflet and other important things in safe custody	1.00
Computer and accessories	1	For data entry, calculation and documentation of different activities	0.45
		Total	**227.91**
Nested units			
RERS, Mendipathar			
Computer with Lesser Printer	1	At present there is only 1 set of computer for functioning of entire works of the station. Two scientists are presently working in the station without computer facilities; hence there is utmost necessity of a new computer set (Computer with Laser printer) for the scientists supporting the technical works.	0.50

Motorized Grass Cutter	1	Due to luxuriant growth of weeds in the plantation area of RERS, Mendipathar, maximum no. of mandays are engaged for frequent weeding & cleaning etc. As such, a motorized grass cutter is highly essential to maintain the Eri food plantation.	0.07
Motorized Water Pump (1HP),	1	Particularly during winter season, it becomes quite difficult to maintain Eri food plants & rising of Kesseru nursery due to acute shortage of water .As a result, plants are unable to produce sufficient leaf for silkworm rearing as per Annual Target. Hence, a motorized water pump having capacity of 1 HP is essential for irrigation and daily use of the station.	0.08
Plastic rearing Tray, (Size- 55 x 85 cm, @ 500/-per tray approx.)	50	To conduct rearing of different strains, Eco races and maintenance of Improved Eri silkworm breed, (since most of the existing wooden trays presently used are become unserviceable) the indented quantity of plastic trays is highly essential.	0.50
Drinking water facility in office (R O Filter)	1	There is no drinking water facility for the office staffs, deficiencies of which has been realizing long back particularly in summer season. Therefore, one drinking water filter R O. facilities is urgently required.	0.20
Refrigerator	1	Refrigerator is an essential requirement in the office laboratory for preserving different types of items, samples, including chemicals etc. At present RERS, Mendipathar has not a single refrigerator for use. So one refrigerator is highly essential.	0.20
One Electric Inverter set	1	There is occurrence of frequent load shading during office hours which greatly hampers day to day office works. Hence, one Electric Inverter is required for smooth functioning of the office.	0.20
B.O.D. Incubator	1	This station has one old BOD incubator which is not functioning properly. RERS, Mendipathar producing & supplying Eri Dfl's including C-2 Breed. As such this station is facing difficulties in preserving Dfls & seed cocoons. Therefore, one new BOD Incubator is required to overcome such problems.	0.50
Binocular Microscope	2	For detection of pathogen during mother moth examination.	0.50
Electronic Chemical Balance (0.01 – 200 gm.)	1	For weighing of chemical & silkworm egg (Dfl) etc.	0.50
Digital Camera with movie maker(	1	To capture the scientific programmes & records of various field	0.20

high megapixel/ resolution)		activities for reporting & documentation.	
		Total	**3.45**
REC, Lakhimpur			
Electronic Balance	1	Measuring/ weighing of cocoons, worms, pupae, etc	0.20
BOD Incubator	1	Experimental / Official	0.70
Motorized Pruning Saw	2	Maintenance of muga host plants through pruning/pollarding	0.20
Microscope	1	For Moth examination at the REC	0.15
Refrigerator	1	Experimental purpose under REC	0.25
Nylon Net for rearing of silkworm	10	Early stage rearing of Muga silkworm	0.40
Foot Compression Sprayer	1	Spraying insecticides/ fungicides/ disinfection of farm, etc	0.12
Air Conditioner	1	For office	0.55
File Cabinet (4 chambers)	1	Keeping files/registers of the REC	0.25
Desktop Computer	1	For office as the old computer is not working smoothly	0.45
Moth examination Table	1	For moth examination at REC during grainage	0.20
Steel stools	3	For moth examination at REC during grainage	0.03
Chairs for staffs and guests	10	For office	0.20
Bamboo Mountage	15	Spinning of cocoons during rearing at the REC	0.15
Motor Bike	1	Mobility for Scientist and staffs during visit of Farmers field	1.00
		Total	**4.85**
RMRS, Boko			
Electronic balance	1	For research project work in the pipe line	0.30
Leaf area meter	1	For research project work in the pipe line	9.00
CI-340 Photosynthesis system	1	For research project work in the pipe line	14.50
		Total	**23.80**
		Grand total	**260.01**

C. Revenue Generation target for the year 2017-18

#	**Particulars**	**Amount (Rs. In lakh)**	#	**Particulars**	**Amount (Rs. In lakh)**
1.	Eri Section (GCC Chenijan)	1.20	12	RMRS, Boko	6.00
2.	Entomology Section	0.60	13	RERS, Mendipathar	1.10
3.	Pathology Section	0.50	14	RERS, Shadnagar	0.80

4.	Biotechnology Section	0.80	15	REC, Tura	0.80
5.	Soil Chemistry & Agronomy	0.80	16	REC, Lakhimpur	1.00
6.	Extension & Training	4.00	17	REC, Coochbehar	1.00
7.	Guest House	1.00	18	REC, Kokrajhar	0.50
8.	Field Laboratory, Titabar	0.40	19	REC, Diphu	0.50
9.	Host Plant	0.60	20	REC, Fatehpur	0.30
10.	Seed Technology Section	1.36	21	Other	14.94
11.	Rearing Section	1.80	**Total**		**40.0**

Annexure 6.IX

Target at a glance during 2017-18

Name of institute	Projects			Extension programs					Technologies to be transferred		Training to be conducted		DSHC to be issued	Publicity material to be published/ films-video to be made (No.)
	Projects of earlier year continued through	Projects concluded during the year	New Projects initiated	Farmers meet / Krishi Mela	Field day	Farmers day	Aware-ness program-mme	Vichar Gosthi/ Group Discus-sion	Techno-logies transf-erred (No.)	Farmers covered (No.)	Programs Conducted (No.)	No. Trained		
CSR&TI Mysore														
CSR&TI Berham pore														
CSR&TI Pampore														
CTR&TI Ranchi														
CMER&TI Ladoigarh	**12**	**5**	**8**	**3**	**18**	**18**	**21**	**42**	**44**	**880**	**57**	**2370**	**800**	**68**
CSGRC Hosur														
SBRL Kodathi														
SSTL Kodathi														
CSTRI, Bangalore														

Annexure –I

Name of the Seri Model Village and associated Nodal Officers

#	Sector	Name of the Seri Model Village/District	Name of the Nodal Officer	Coordinator
1	**Muga Pre cocoon**	Khowang Seri Model Village, Dibrugarh	Sri D.Goswami, Scientist –D, CMER&TI	Shri D. Goswami, Scientist –D CMER&TI, Lahdoigarh
		Chinatoli & Borpathar Seri Model Village, Golaghat	Dr. (Mrs) R. Das, Scientist –D, CMER&TI	
		Baida Langurpara, Seri Model Village Goalpara	Dr. M. Deka, Scientist –C, RMRS, Boko	
		Charideo Seri Model Village, Sivsagar	Mrs. Ranuma Das, Scientist –D, CMER&TI	
2	**Eri Pre cocoon**	Dadhara Seri Model Village, Golaghat	Dr. M.C.Sarmah, Scientist- C, CMER&TI	
		Tamulichiga Seri Model Village, Sivsagar	Dr. B.N. Sarkar, Scientist- C, CMER&TI	
		Barekuri Seri Model Village, Tinsukia	Sri S.A.Ahmed, Scientist -C, CMER&TI	
		Deogharia, Seri Model Village, Jorhat	Mrs. M.D Senapati, Scientist –C, CMER&TI	
3	**PCT**	Borhula Seri Model Village, Jorhat	Dr. D.K. Gogoi, Scientist –C, CMER&TI	

Annexure -II

Estimated Budget for implementation of Seri Model Villages during 2017-18

Sl. No	Particulars/ Activities	Quantity	Rate (Rs.)	Amount (Rs. In lakhs)
1.	Organization of awareness meet in surrounding new areas of SMV	9	5000/-	**0.45**
2.	Organization of technology demonstrations	9	2000/-	**0.18**
3.	Organization field days	18	2000/-	**0.36**
4.	Supply of seed cocoons to pvt. graineurs	128000 (Eri)	1/- per no.	**3.20**
		64000 (Muga)	3/- per no.	**7.50**

5.	Supply of disinfectants (bleaching powder, lime and Sodium hypochloride)	9	Lump sum	**7.50**
6.	Supply of seedlings (Kesseru / Borpat / Som) for plantation during demonstration	80000	5/- per no.	**4.00**
7.	Mobility of the scientists/technical staffs	9	50000/-	**4.50**
8.	Mobile bills of Nodal Officers	9	6000/-	**0.54**
	Total			**28.23**

Annexure –III

Target of Dfls brushing and cocoon production in each Muga Seri Model Villages during 2017-18

Name of the crops	Dfls to be brushed	Number of farmers to be involved	Number of cocoons to be produced	Dfls to be produced (g)	Estimated Raw silk (Kg)	Estimated turn out from sale proceed of cocoons (Rs. In lakh)
Jethua Commercial crop (Apr-May)	25000g	85	1500000 (@ 60 cocoons/dfl)	-	300 (@ 5000 cocoons for 1.0 kg silk)	15.00 (@Rs.1/- per cocoon)
Bhadia Seed crop (Aug-Sep)	2500g	15	100000 (@ 40 cocoons/dfl)	25000	-	2.50 (@Rs.2.5 per cocoon)
Kotia commercial crop (Oct- Nov)	25000g	85	1500000 (@ 60 cocoons/dfl)	-	300 (@ 5000 cocoons for 1.0 kg silk)	15.00 (@Rs.1/- per cocoon)
Chatua Seed crop (Feb-Mar)	2500g	15	100000 @ 40 cocoons/dfl	25000	-	2.50 (@Rs.2.5 per cocoon)

Annexure –IV

Target of Dfls brushing and cocoon production in each Eri Seri Model Village during 2017-18

Crop season	Dfls to be reared	Number of farmers to be involved	Cocoons to be produced (Kg)	Estimated pupae to be produced (Kg)	Raw silk to be produced (Kg	Estimated turn out from sale proceed of pupae (Rs. In lakh)	Estimated turn out from sale proceed of cocoons (Rs. In lakh)	Total income generation (Rs. In lakhs)
Apr-Jun	3000 (@ 25-50 dfls/farmer)	100	300 (@ 10.0 kg/100dfls)	1500 (@ 50kg per 100 dfl)	240 (@ 80% of Total cocoons)	4.50 (@ Rs.300/- per kg)	2.10 (@ Rs. 700/ per kg)	6.60
Jul- Sep	3000 (@ 25-50 dfls/farmer)	100	300 (@ 10.0 kg/100dfls)	1500 (@ 50kg per 100 dfl)	240 (@ 80% of Total cocoons)	4.50 (@ Rs.300/- per kg)	2.10 (@ Rs. 700/ per kg)	6.60
Oct-Dec	3000 (@ 25-50 dfls/farmer)	100	300 (@ 10.0 kg/100dfls)	1500 (@ 50kg per 100 dfl)	240 (@ 80% of Total cocoons)	4.50 (@ Rs.300/- per kg)	2.10 (@ Rs. 700/ per kg)	6.60
Jan-Mar	3000 (@ 25-50 dfls/farmer)	100	300 (@ 10.0 kg/100dfls)	1500 (@ 50kg per 100 dfl)	240 (@ 80% of total cocoons	4.50 (@ Rs.300/- per kg)	2.10 (@ Rs. 700/ per kg)	6.60