

CENTRAL SILK BOARD BENGALURU-560068

The Annual Action Plan meeting of CSB R&D institutes and seed organizations for the year 2022-23 was held in hybrid mode (Offline & online) on 20th and 21st March, 2022 under the Chairmanship of Shri Rajit Ranjan Okhandiar, IFS, Member Secretary, Central Silk Board, Bengaluru. At the outset, Dr V Sivaprasad, Director (Tech), CSB, Bengaluru welcomed Shri Rajit Ranjan Okhandiar, Member Secretary, CSB, Bengaluru, Dr. Narendar Rebelli, Director (Finance), CSB, Bengaluru, all the Directors/ In-charge Officers of CSB R&D Institutes and Seed Organizations and the Officers from board secretariat to the Annual Action Plan meeting. The list of participants is appended at *Annexure-I*.

Shri Rajit Ranjan Okhandiar, IFS, Member Secretary in his opening remarks greeted all the participants and requested to present the progress for 2021-22 and proposed targets for 2022-23 by each institute briefly.

Dr. V. Sivaprasad, Director (Tech) & the Member Convener then took over the meeting and presented the highlights of R&D activities of all the CSB Institutes for 2021-22. Dr. Manthira Moorthy S, Scientist-D, RCS, CO, CSB, Bengaluru presented the Action Taken Report/Follow Up action to the decisions taken during the Annual Action Plan meeting held on 4th and 5th February, 2021 at Bengaluru. After detailed deliberations, the following suggestions/ recommendations were made.

a) General Recommendations:

1. Various detection techniques developed or under process for pebrine disease across the silk sectors need to be integrated and the most effective and cost-beneficial ones to be finalized and popularized.

Action: All concerned institutes

2. Evaluation of new breeds/hybrids for post-cocoon parameters to be taken up at institute level as well as at CSTRI, Bengaluru for proper validation, besides effective utilization of PCT scientists working at the R&D institutes.

Action: CSTRI, Bengaluru and all concerned R&D institutes

3. For implementation of Seed Act, state wise proposals/requirements with detailed guidelines/ terms of reference to be submitted by 15th June 2022 so as to examine engaging the personnel from KVK's in consultation with ICAR after needful training. Similarly, the KVK personnel who have already been trained by CSB, a detailed proposal to be submitted on utilization/involvement of KVK personnel in the CSB extension activities.

Action: All concerned/NSSO

4. The modalities of establishment and functioning IPBP cell at Central Office should be finalized before April 2022.

Action: RCS, CSB, Bengaluru

5. To prepare and publish the ready-reckoner for Agro-Seri-Forestry model in line with SMAF and an exclusive brainstorming workshop/training programme on Agroforestry model in sericulture to be organized between June-July 2022.

Action: RCS/CBT, CSB, Bengaluru

6. To organize the second batch of Young Scientists meet at CO-CSB for 2018-19 batch Scientists for formulation of minutes, scope, thrust area and strategies.

Action: RCS/CBT, CSB, Bengaluru

- 7. The adoption of soil health cards to be verified and a detailed report to be submitted on the same. Farmers database to be maintained and to classify whether the farmer is a new or repeat farmer. Also advised to determine on type of value based knowledge can be derived from the available data-base.
- 8. Constraint analysis to be performed for low achievements against the set targets of ECPs/training programmes. The feedback from the stakeholders needs to be analyzed and documented technology-wise.

Action: All R&D Institutes, Stats & RCS, CO, CSB, Bengaluru

9. Due to escalation of price of all the essential commodities and repeated requests made by CSB R&D institutes/Seed Organizations, the budget allocation for execution of the Resham Krishi Mela is revised as follows.

Particulars	Number of farmers	Existing budget provision (Rs. In lakhs)	Enhanced/revised to (Rs. Lakhs)
KrishiMela/ Reelers Mela cum exhibition (at main institute)	400-500	2.50	3.00
	(150-200 at RSRS level)	(Rs.1.25 lakhs at RSRS Level)	(Rs 1 50 Lakhs @ RSRS level)

10. To analyze targets and achievements for the last 3 years to determine the constraints and distribute the work accordingly to all the scientists.

Action: All Institutes

Institute wise progress achieved for the year 2021 -2022 (till Dec, 2021) and the targets for the year 2022-23 was reviewed and the following decisions were taken. A total number of 62 Research Project were agreed upon for taking up by the institutes for the year 2022-23 and the institute wise final targets for research projects, training, CBT, IEC, Patenting & commercialization etc., is placed at *Annexure-II*.

Institute Specific recommendations:

i) CSRTI, Mysuru:

- 1. The OFT proposal on outcome of the project "Development of Integrated Pest Management (IPM) module for leaf roller *Diaphania pulverulentalis* (Lepidoptera: Pyralidae) in mulberry" (PRE 01010 SI) to be submitted to CO for approval.
- 2. Commercialization and fixation of royalty fee for Alpha Linoleic acid (ALA) technology need to be finalized.
- 3. To submit a detailed explanation/report for not achieving the component-wise targets, under utilization of R&D fund and shortage in revenue generation during the year 2021-22.
- 4. Already established 4 SRCs in Karnataka and Tamil Nadu to be made functional.
- 5. Under CBT, the target for Intensive Sericulture Training should be increased to 5 batches including 100 participants instead of 1 batch with 20 participants.
- To continue to utilize M-LAMP testing for mulberry seed sector, especially the batches which are negative in microscopic examination in Pebrine disease monitoring programme. M-LAMP must be included as one of the system for Pebrine monitoring at nucleus and basic seed levels in vanya sector.

ii) CSRTI, Berhampore:

- 1. To discuss/explore training programmes under Samarth in pre-cocoon programmes.
- 2. Minimum target of stakeholders under CBT training programmes should be 2000 and increase the targets of Extension Communication Programmes as per 2021-22
- 3. To furnish the reasons for reduced achievements as against the set targets under various heads and analyze the reasons for the low R&D budget utilization.
- 4. The OFT data on CRCs and collapsible mountages, rate of cocoon should be documented as an indicator

iii) CSRTI, Pampore:

- 1. The Handbook on Sericulture technologies may be published in Hindi by the end of June, 2022; however, the English version of the same to be brought out simultaneously.
- 2. Identification of 5km stretch of NHAI roadway for taking up of mulberry plantation may be finalized on priority in consultation with NHAI authorities and the generic MoU may be executed on priority for which Director (Tech) would be the signing authority.
- 3. With regard to the Uzbekistan collaborative project, the Material Transfer Agreement (MTA) to be executed on priority and if need, ISC intervention may be sought.
- 4. With regard to design and development of rearing houses, collaboration with other lead institutes/organizations may be explored.
- 5. The outcome of concluded research project "Development of superior mulberry varieties through controlled hybridization for North West Indian States" (PIB-3586) to be taken up in PYT mode.
- 6. Development of trap through biorational tactics for the management of mulberry leaf webber *Glyphodespyloalis* (ARE03005SI) to be concluded as per the given timeline and the conclusion project report in RMIS-10 format may be submitted by April 2022. However, the validation of light traps should be continued as routine activity for confirmation of the project outcome. Progress/outcome of such trials to be reported to CO periodically along with the QPRs.
- 7. Testing of TT21 Hybrid should be undertaken in summer and autumn season without fail, besides spring season in NW & Northern states.
- 8. To track status of the pending patent filed on 'A process for obtaining phytoecdysteroids from weeds of *Amaranthaceae* for synchronized maturation of mulberry silkworm' with

M/s L.S. Davar & Co., Kolkata as the issue is pending since 2013. The updated status to be furnished to CO latest by April 2022.

iv) CTRTI, Ranchi:

- 1. The ecorace conservation and disease survey programmes to be taken up in project mode and the proposals to be submitted in RMIS formats. With regard to eco race conversation, project profile/design, methodology and documentation processes could be finalized following NBA/ICFRE regulations.
- 2. Egg washing machine technology to be included as component under ToT project.
- 3. To monitor RMB activities regularly as huge revolving fund is involved and auditing may be taken up in consultation with Central Office, Bengaluru.
- 4. To explore Mechanization in farm management and silkworm rearing activities in vanya sector.
- 5. To involve Scientists from CSTRI, Bengaluru in for demonstration of cocoonase at filed level and explore the possibilities of patenting cocoonase technology.
- 6. The targets under patents filling to be revised to three for the year 2022-23
- 7. To publish the Hand Book on Tasar Sericulture before 30th May 2022
- 8. As the *A. mylitta* genome is analyzed, markers may be identified *in silico* for host-plant nutritional indices in different ecoraces.
- 9. Explore MAS for tasar breed development programmes utilizing WGS data-base

v) CMERTI, Lahdoigarh

- 1. The status of muga breeds viz., CMR-1 & CMR-2 and Eri hybrids, YP x CBZ and CBS X GBZ to be furnished by May 2022 including the performance across the seasons.
- 2. Research project to be taken up on Eri pupae storage & packaging, besides strategy for transportation and marketing of pupae to be worked out. Products from Korea/Japan on pupae & pupae by-products may be examined and development of similar products may be explored in collaboration with R&D labs on food sciences.
- 3. To take up need based research project on "Development of Ericulture in Gujarat (Castor based) and Tamil Nadu (Tapioca based), for which detailed proposals in the RMIS formats to be submitted by June 2022.
- 4. The muga silkworm conservation programme to be taken up in project mode.
- 5. To expedite the management practices developed for control/eradication of tiger band disease in oak tasar sericulture.
- 6. To conduct training programme on Statistics for the Scientists under CMERTI before 31st March 2022.
- 7. To publish the Hand Book on Sericulture (Muga & Eri) before 31st May, 2022

vi) CSGRC, Hosur

- 1. CSGRC, Hosur may explore the possibilities of collaborating on R&D activities with Zoological Survey of India and Botanical Survey of India.
- 2. The pre-breeding activities, conservation of host plant through cryo-preservation to be explored and genetic stability of cryo-preserved material to be test verified.
- 3. To accelerate cytological studies under ongoing research project 'Studies on cytological status of core-set mulberry accessions (PIG 06004SI)'

4. To correlate data for identification of duplicates under "Molecular characterization of mulberry genetic resources for the identification of duplicates and effective utilization" (PIG 06005SI) with the collection source and morphological traits/pedigree.

vii) CSTRI, Bengaluru

- 1. The technologies developed for Tasar silk industry should invariably be validated (OST/OFT) in association with CTRTI-Ranchi under ToT project.
- 2. After creating awareness in the weaving clusters, the developed technology on 'wrinkle free fabric' to be explored for commercialization.
- 3. A video on tasar wet reeling process to be recorded and uploaded on YouTube/Social media.
- 4. Explore the possibilities of developing products like carpet, filling materials (wadding's) etc. besides vermicompost from the recycled yarn.
- 5. Water requirement for the production of 1 kg silk fabric vis-à-vis other natural fibers *viz.*, cotton, jute etc. to be worked out on priority and a detail report may be submitted by May 2022.

viii) SBRL, Kodathi

- 1. A three-week (21 days) training programme on Biotechnology aspects may be designed under SAMARTH scheme with appropriate course content and programme schedule developed and to be submitted by May 2022.
- 2. Target under patents to be filed for the year 2022 to be kept as 2 (MASN and LFA)
- 3. To explore possibility for sex determination at egg stage through AI & ML under project mode in association with SSTL, Kodathi.
- 4. To arrange for proper display board on SBRL building.

ix) SSTL, Kodathi

1. To explore possibility for sex determination at egg stage through AI & ML in project mode in association with SBRL, Kodathi.

x) NSSO, Bengaluru

- 1. State wise/organization-wise commercial Bivoltine seed production and disposal statistics for the last 5 years to be furnished to Seed Cell.
- 2. To explore possibilities of app based/online seed transactions viz. indenting, payment, disposal, production etc.
- 3. To trouble-shoot the operation of E-cocoon app in consultation with the web developer and sort out the connectivity/networking issues.
- 4. To explore establishment of micro-CRC model in non-traditional states based onn NRDC model of CSRTI-Berhampore
- 5. NSSO to co-ordinate 'Seed Act Implementation Programmes' with BTSSO & MESSO, including out sourcing of SOs & SAs

xi) BTSSO, Bilaspur :

1. To communicate with NESAC indicating the geo-tagging devices purchased, problems being faced in the software and connectivity issues. After rectification, all the CSB farms/units to be geo-tagged.

- 2. Data on Tasar silkworm seed production by BTSSO and the DoSs besides private agencies if any, to be collected for the past 5 years and the comparative statement/analysis to be furnished along with future strategies for ascertaining actual requirement in the field.
- 3. Civil works to be taken up through CPWD, if any during the year 2022-23 to be included in the Annual Action Plan.
- 4. Proposals for grainage requirements if any, to be submitted to Central Office for further examination.

xii) MESSO, Guwahati

- 1. Data on supply of Eri and Muga silkworm seed production by MESSO should contain head wise details like supply through DoS & supply through CSB units etc.
- 2. The number of ASRs should be increased in Muga sector to increase the Muga seed production and conduct refresher training programmes for ASRs of Muga targeting seed quality.
- 3. Target for production of Muga and Eri silkworm seed may be kept as per the targets of 2017-18.
- 4. MESSO to work in close coordination with DoSs to address the field problems effectively.
- 5. The efficacy of software developed by MESSO-Guwahati for DCB arrears should be explored for usage across other seed organizations.

xiii) **CBT:**

- 1. To attract more stakeholders, a detailed proposal under SAMARTH Scheme with proper justification to be submitted to Secretary, Textiles seeking permission to reduce duration of training period.
- 2. The research internship programmes in sericulture following MoEF&CC programme to be developed along with RCS-CO-Bengaluru within the current academic year.
- 3. Database of Farmers to be maintained by CBT Division and an analysis regarding the farmers attending the different extension programmes to be made. Also advised to explore the possibilities of using the data in consultation with an AI expert.
- 4. To collect data on last year's activity from four SRCs (2 from Karnataka & 2 from Tamil Nadu).

xiv) Publicity/Computer Section:

- 1. To collect the available video clippings on sericulture in all the languages since beginning, arrange in chronological order and upload in social media viz., Youtube/Facebook/ Instagram etc
- 2. Websites of the CSB R&D Institutes and Seed organizations should be periodically updated with the latest information on research achievements.
- 3. To enhance aesthetic and uniform appearance of official websites of R&D institutes, Computer Division at CO-Bengaluru to circulate a template by May 2022.
- 4. The bandwidth and other server related issues should be addressed in consultation with NIC.

General Suggestions:

- 1. All the R&D institutes to expedite process for procurement of equipment starting from April to utilize allocated budget effectively. Similarly, expenditure under capital to be communicated w.e.f. April itself for timely processing with the Standing Committee.
- 2. Mid-term review of progress of action plan and utilization of fund allocation to be conducted during August-Sept for effective utilization/sanction.
- 3. Regional Sericultural Research Stations/RSTRSs should take up suitable projects based on regional problems.
- 4. Number of research papers published by institutes for the year 2021-22 is very less/poor as compared to the number of scientists and research projects taken up; the issue needs to be addressed at Director's level. To review publications of past three years to find out reasons for poor/low publications. The research findings/outcome of research projects to be published in the journals of national/international repute; online publishing and predatory journals needs to be avoided. To review the concluded research projects for the last 5 years and efforts to be taken to publish the outcome of the same where ever research publications were not made so far.
- 5. The publication should be relevant to the research works being handled by the scientists in CSB and the manuscripts should invariably to be screened at institute level before submission and papers published without intimation of the concerned Institute may not be considered for FCS. Particulars of publications should invariably be mentioned in the APARs of concerned scientists.
- 6. Even after repeated reminders on various occasions viz., review of quarterly reports, scientific/technical audit etc, utilization of funds under the approved research projects (CSB funded) is less than 50% only, which is quite alarming. Directors are advised to look into the issues thoroughly and determine the reasons for poor/low fund utilization.
- 7. Before submission of any Research Project proposal to Central Office seeking approval, the Director/in-charge Officers should invariably examine budget details along with PI and certify to that effect.
- 8. A fully mechanized model nursery for mulberry, tasar eri and muga host plants to be maintained with a minimum quantity of 10,000 saplings at each institute to cater sudden requirement/demand from the stakeholders.
- 9. Man-power assessment of CSB to be matrixed based on bare minimum requirements of CSB institutes/units.
- 10. To create Whatsapp groups at all the institutes for better communication and processing of the pending issues.
- 11. R&D institutes must interact with DoSs for identification of field related problems & organize brain storming sessions in specialized areas. Workshops for DoS officials on technology update in the previous five years to be organized.
- 12. Training programmes to be initiated for DoS officials in disease monitoring and moth certification.
- 13. Appropriate contingency requirements for non-delegated units to be proposed.

3.5.22

Rajit Ranjan Okhandiar, IFS Member Secretary

Annexure-I

List of participants attended the Annual Action Plan Meeting for the Year 2022-23 on 20.03.2022 and 21.03.2022 (in hybrid mode)

1) Sh.R.R.Okhandiar, Member Secretary, CSB, Bengaluru

2) Dr. Narendar Rebelly, Director (Finance), CSB, Bengaluru

3) Dr. V Sivaprasad, Director (Tech), CSB, Bengaluru

4) Dr. Babulal, Director, CSRTI, Mysore (Online)

5) Dr. Kishore Kumar, Director, CSRTI, Berhampore (Online)

6) Dr. Sardar Singh, Director (I/C), CSRTI, Pampore (Online)

7) Dr. K. Sathyanarayana, Director, CTRTI, Ranchi (Hybrid mode)

8) Dr.Vijayakumari, Director, CMERTI, Lahdoigarh (Online)

9) Dr. Sreenivasa BT, Director, CSGRC, Hosur

10) Dr. Subhas V Naik, Director, CSTRI, CSB, Bengaluru

11) Dr. Ponnuvel K.M, Scientist-D, SBRL, Kodathi

12) Dr. Veeranna Gowda, Scientist-D, SSTL-Kodathi

13) Dr. Shashindran Nair. K, Scientist-D, NSSO, CSB, Bengaluru

14) Dr. Borpuzari, Scientist-D, MESSO, Guwahati (Online)

15) Dr. M.S Rathore, Scientist-D, BTSSO, Bilaspur (Online)

16) Sh. H.Rudranna Gowda, Scientist-D, PCT, CSB, Bengaluru

17) Dr. Manthira Moorthy, S, Scientist-D, RCS, CSB, Bengaluru

18) Dr. P. Kumaresan, Scientist-D (S.M), CSB, Bengaluru

19) Dr. Rahmathula, Scientist-D, CSB, Bengaluru

20) Sh.Joy Naliath John, Scientist-D, CSB, Bengaluru

21) Sh.S Nazeer Ahmed Saheb, Scientist-D, RCS, CSB, Bengaluru

22) Dr. Prashanth Sangannavar, Scientist-C, RCS, CSB, Bengaluru

23) Dr. Manjunatha, G.R, Scientist-C, RCS, CSB, Bengaluru

24) Sh. Pawan Shukla Scientist-C, SBRL, Kodathi

25) Sh. R.K.Sinha, Deputy Director (Publicity), CSB, Bengaluru

26) Sh. Mahadev, D.D, A&A, CSB, Bengaluru

27) Sh Nanda Kumar, D.D, Computers, CSB, Bengaluru

28) Sh. P.K Mishra, A.D, A&A, CSB, Bengaluru

29) Sh. Shastry, A.D (Stores), CSB, Bengaluru

30) Sh Kiran Batheri, A.D, Publicity, CSB, Bengaluru

31) Ms. Poonam Ramashesha, Stenographer (Grade-I), CSB, Bengaluru

32) Ms. Naga Teja Shirisha. T, Stenographer (Grade-II), CSB, Bengaluru

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33) Ms. Abmika, Asst Tech, CSB, Bengaluru

34) Dr. Anil Kumar, Technical Asst, CSB, Bengaluru

35) Sh. Sreenivasa Raju, FA, CSB, Bengaluru

TARGETS AT GLANCE FOR THE YEAR 2022-23 (PROJECTS, PATENTS & COMMERCIALISATION, ECP, CBT & IEC) Annexure-II

	#	CSRTI Mysore	CSRTI Berhampore	CSRTI Pampore	CTRTI Ranchi	CMERTI Lahdoigarh	CSGRC ,Hosur	CSTRI Bengaluru	SBRL Kodathi	SSTL Kodathi	NSSO Bengaluru	BTSSO Bilaspur	MESSO Guwahati	CBT CO	Total
RESEARCH PROJECTS		14	8	6	8	6	4	10	4	2				1.1.1 P	62
PATENTS/COMMERCILIZATION		2	2	1	3	3		3	2	1				_	17
	Resham Krishimela	4	4	3	7	3		2				1	1		25
	Farmers Field Day	30	20	24	36	8									118
7	Awareness Programme	82	45	24	28	23		50		6		18	64 45		276
o s	Technology Demonstration	82	45	26	40	23		50	1	10					277
EXTENSION COMMUNICATION PROGRAMMES	Workshop/ Seminar/ Conference	1	1	1	06#	2		4**	1			4			20
	Sensitization Programme for ASRs	08 80									640	100	50		790
R AN	Technical Workshop for CRCs	10	2	2							60				74
COI	Round Table for bivoltine private RSPs										2				2
	Other Activities							50*							50
	Total ECPs	209	117	80	117	59		156	2	16	702	123	51		1632
	Training under STEP	25	25	25	52	25	25					25		750	952
	PGDS		30		20										50
	Intensive Sericulture Training	100	40	60											200
	Farmers Skill Training	1145	425	590	774	475				300	100	100	240		4149
	Exposure visit		300		180										480
Y BUILDING & TRAINING PROGRAMMES	Technology Orientation Programme	30	100	125	50	250		20	10	10	20	20	20		655
	Training under post cocoon sector	88				150		`							150
	Training for Adopted Seed Rearers (ASRs)										100	300	40		440
	Hands on training to tasar seed producers											1075			1075
E DO	Refresher training on Seed Act									10	200				210
CAPACITY BUILDING PROGRAMIN	Orientation training for SOs/SAs										50				50
	Training on silk reeling (10 Days)							220							220
	Training on silk weaving (10 days)							100							100
	Training on silk twisting and dyeing (5 days)							120	,						120
	Vanya silk reeling and spinning (5 days)							240		**					240

TARGETS AT GLANCE FOR THE YEAR 2022-23 (PROJECTS, PATENTS & COMMERCIALISATION, ECP, CBT & IEC)

Annexure-II

	#	CSRTI Mysore	CSRTI Berhampore	CSRTI Pampore	CTRTI Ranchi	CMERTI Lahdoigarh	CSGRC ,Hosur	CSTRI Bengaluru	SBRL Kodathi	SSTL Kodathi	NSSO Bengaluru	BTSSO Bilaspur	MESSO Guwahati	CBT CO	Total
	Training for entrepreneurs in PCT (12 days)							20			Cir 64				20
	Training for entrepreneurs in twisting (7 days)							20							20
	Refresher training to DOS/Industry (3 days)							30		"					30
	Training under SRCs (existing)	600	800	300	300	900					00 80				2900
	Establishment of New SRCs	1	1	1	1	3		1			-				8
-	Trainers Training Programme for KVK Scientists			10 Gr	24										24
	Non CBT/Adhoc (sponsored by other agencies)	200	280					20							500
	Periodicals	1	2	3	3	4	3	3	1	1		3			24
S .	Publications														
	Research papers-National	12	6	10	8	5	5	7	4	1	2	4	2	2	68
INFORMATION, EDUCATION COMMUNICATION 2022-23	Research papers-International	14	4	10	5	15	5	2	4	2		2			63
	Proceedings/ Abstracts	9	6	5	10	15	2	2	3	2	6	2	4	2	68
	Books/ Book Chapters/ Manuals etc.	5	4	5	1	10	2	1							28
	Popular Articles	12	6	5	10	10	2	2	2	3	8	2	2	2	66
	Booklets, Brochures etc.	3	4	5	3	10	· 1	1	1	2	1	1	1	1	34
	Extension literature	9	10	10	4	10		1	1	1	2	2	1	1	52
	Films/ Videos	5	4	2	3	15	1	1	2	1	2	1	1	1	39
	Social media	96	20	100	200	50	10	4	10	6	10	50	10	10	576

#Convergence with DOSs regarding ecorace conservation and other issues. *Master Technicians & other extn. programmes-demand dependent ** Includes one seminar in national language hindi and one scientists meet