CENTRAL SERICULTURE RESEARCH & TRAINING INSTITUTE, MYSURU

MINUTES OF 48th RESEARCH ADVISORY COMMITTEE MEETING HELD ON 28 & 29th SEPTEMBER 2022 AT CSRTI, MYSURU

The 48th Research Advisory Committee meeting of CSRTI-Mysuru was held on 28 & 29th September 2022 at CSRTI-Mysuru for reviewing the progress of on-going projects, concluded projects, new projects, TOT, Training and extension activities of the Institute and its nested units for the period from February to July 2022. The meeting was presided over by Dr. Mahadev B. Chetti, Chairman RAC and Vice Chancellor, University of Agricultural Sciences (UASD) Dharwad. The list of the participants is appended as **Annexure -I**.

Dr. Babulal, Director and convener of RAC welcomed the Chairman, members of RAC and the invitees. He also welcomed all the heads of divisions/sections, scientists and JRFs, SRFs, PAs of the main Institute and all scientists from nested units, RSRSs, RECs and REC sub units, who attended the meeting. Dr. Babulal, Director made brief presentation of the highlights of the achievements made by the institute and nested units during the reporting period.

The Chairman in his introductory remarks welcomed all the members, invitees and the scientists of CSRTI, Mysuru to the meeting. The chairman appreciated the work on development of drought resistant varieties and raised concern over the impact of climate change issue in the recent times in India and other countries. He also mentioned about the recurring flood situation and suggested to address its impact on mulberry. He advised to focus the research work on drought adaptive traits. Chairman spoke about growing mulberry under natural farming system which is the mandate of all agricultural universities as per the initiative of GoI. The available success stories of natural farming in other agricultural crops may be referred for implementation.

Item No.2.CONFIRMATION OF THE MINUTES OF 47th RAC MEETING HELD ON JANUARY 24TH and 25th JANUARY, 2022.

The Research Advisory Committee approved the minutes of the 47th RAC meeting as no comments were received from any of the members.

Item No.3.REVIEW OF FOLLOW-UP ACTION TAKEN ON DECISIONS OF 47th RAC MEETING

The Committee discussed the action taken on the major suggestions during previous RAC meeting and the gist of same is as follows:

Mahadev B. Chetti, RAC Chairman:

- Chairman noted the action taken on midterm corrections with experts to critically evaluate the progress and expressed concern over low budget utilization and advised to conduct internal review meeting to know the status of project wise budget utilization.
- While reviewing the status of MoUs with universities and institutes, he once again advised to have MoUs with universities working on sericulture / sericulture colleges like Chintamani college under UAS Bengaluru and also with International Institutions.
- Chairman advised to conduct more extension programmes in North Karnataka as there is more potential for sericulture. He stressed the need of strengthening extension machinery to cater to the needs of sericulture farmers.

N.K. Krishna Kumar:

- He stressed on publication of research papers in journals having high impact factor. Accordingly, each scientist should publish one paper in a year in journals having high impact factor.
- He felt the need to look into the recommendations of phosphorous inputs in mulberry
- It was opined that scientific names of mulberry pests, fungal and bacterial isolates should be mentioned in the research highlights. Similarly under the DUS project, it was suggested to identify the ten markers which are polymorphic.
- In Pupae based fish feed formulations, the details of the type of fish on which these were tested should be indicated as the feeding habit of fishes vary.
- He suggested the scientists who has attended the ISC at Romania to present in brief about the seminar.

S. B. Dandin:

- It was suggested that, while reporting the outcome of the study or comparison of data, indicate values/numbers to clarity instead of meagre statements and the improvement in percentage should be mentioned.
- It was also suggested to mention the stress condition in the research projects and to mention the names of the improved multivoltine lines.
- Advised to give priority to pebrine monitoring in seed areas and to formulate a team including KSSRDI scientists for the same.
- Suggested to conduct one survey by a committee including scientists from CSTRI, NSSO and SSTL to analyse the cocoon quality viz., defective cocoon percentage, silk ratio etc., in the field level.

Dr. Sreenivasa Rao:

- Emphasized on the using of grafting technique in mulberry for popularizing the varieties with special features. After discussion the house opined that the popular varieties of mulberry are good rooters and grafting may not be economically viable.
- Suggested having MoUs with life science universities for student exchange programs which will facilitate more publications.
- Advised the scientists to follow standard protocols while handling fungal antagonistic samples from fields.
- Advised to take up more demonstration of Rot Fix for root rot disease in mulberry in Telangana.

The committee advised to drop the second phase of PIC 3620: Engineering photosynthesis in mulberry for resilience to climate change: A C4 approach, as it is impossible to bring any anatomical changes in plants.

Thereafter, meeting started as per agenda items. The brief deliberations and resolutions adopted are as under:

Item No.4. REVIEW OF CONCLUDED PROJECTS

1. PIB 3631: Primary yield evaluation for identification of superior mulberry hybrids with drought adaptive traits under sub-optimal irrigated conditions

Decisions: The committee advised to consider data only for non rainy season to draw the conclusion pertaining to sub optimal experimental conditions. Further, the short listed genotypes are to be evaluated under FYT.

(Action: Tanmoy Sarkar, Scientist-C, MBG)

2. **PIN 3563: Evaluation of improved mulberry genotypes for yield potential, nutrient uptake and use efficiency under varied cultivation practices**

Decisions: The committee noted the outcomes of the project and suggested to present year wise data instead of average and pointed that the benefit cost ratio calculated can be used for the sustainability studies in future.

(Action: Dhaneshwar Padhan, Scientist-C, Agronomy)

3. PRE 01010SI : "Development of Integrated Pest Management (IPM) module for leaf roller *Diaphania pulverulentalis* (Lepidoptera: Pyralidae) in mulberry"

Decision: The use of parasitoids identified to be standardized and percentage of parasitism separately and in IPM has to be studied. It was also suggested to do the pest- parasite interaction and to confirm the safety period of the recommended insecticides for a minimum of two generations of silkworms. The committee suggested to provide hands on training on molecular biology tools in related area to the PI.

(**Action: S. Mahiba Helen, Pest Management laboratory**)

4. MFM 01020 CN: Development of artificial intelligence empowered multisensory approach for gender classification and separation of silkworm cocoons

Decision: The committee noted the progress made under the project and appreciated the team for the efforts for developing two machines and doing patenting and commercialization of it under the project.

(Action: S.M.Hukkeri, SED)

5. ARP 01012 SI: Development of a knowledge base on the silkworm diseases and pests and their management

Decisions: The committee suggested to upload the website content also in Tamil, Kannnada and Telugu for the benefit of stake holders.

(Action: A. V. Mary Josepha (Shery), Scientist-D, Silkworm Pathology)

6. MOE 01021 SI: Evaluation of improved technologies of mulberry sericulture in South India.
Component: Validation of the M-LAMP technology in Mulberry and Vanya sector

Decision: The committee suggested to work out the economics of the LAMP technology and advised to explore the possibility of reducing the cost of testing.

(Action: Mallikarjuna G, Scientist-C, Silkworm Pathology)

Pilot Studies:

1.Identification of candidate gene markers for the development of silkworm breeds/hybrids with longevity associated stress tolerance and productive trait

Decision: It was suggested to consider the reproductive fitness for the conclusion and to have discussion with SBRL, Kodathi for taking up project in this line.

(Action: Ranjini M.S., Scientist C, BBL)

2. Development of Project Management Database of CSRTI, Mysuru

Decision: The committee suggested to improve the database with the missing information if any. The committee also suggested to have one uniform pattern for the website in all CSB Institutes.

(Action: Kusuma L., Scientist C, BBL)

3. Identification of Endophytes for Mulberry foliar diseases and Plant Growth Promotion

Decision: The committee noted the progress

(Action: Satish L, Scientist C, Silkworm Pathology)

Item No.5. NEW PROJECTS FOR APPROVAL

1. Life Cycle Assessment of Mulberry Silk: A National Assessment (MTL01025MI)

Decision: The committee while approving the proposal, suggested to maintain uniform proforma for data collection at all locations.

(Action: Amit Kumar, Sci-C, Soil Science & Chemistry)

2. **Validation of silk fibroin regulators- ubiquitin and mannosidase among silkworm breeds**

Decision: The committee while approving the proposal, suggested to define 5-8 traits viz., shell ratio %, Neatness, filament length etc., for the selection of markers.

(Action: Kusuma L, Sci-C, BBL)

3. ARE01029 MI: Recommendation of novel fungicidal and insecticidal applications for mulberry

Decision: The committee approved the proposal and advised to include other management practices also and to change the title accordingly. It was observed by the committee that refinement of the plant protection schedule is required.

(Action: S. Mahiba Helen, Sci-D, PML)

4.**Development of an integrated management package for the broad mite, Polyphagotarsonemus latus (Acari: Tarsonemidae), in mulberry**

Decision: The committee approved the proposal

(Action. S. Mahiba Helen, Sci-D, PML)

5. BPS 010027 CN: Immunomodulatory and Adjuvant effects of Chitosan Nanoparticles extracted from *Bombyx mori*

Decision: The committee approved the proposal and suggested to check the economic viability of the study.

(Action: Madhusudhan. K.N, Sci-D, BBL)

6. BPS 010028 CN: Value Addition of Cellulose and Chitin Isolated from Sericulture Waste for Advanced Packaging Applications

Decision: The committee approved the proposal.

(Action: Madhusudhan. K.N, Sci-D, BBL)

7.Technology Demonstration and Evaluation of Rearing Performance of Bivoltine Mulberry Sericulture in Navasari District (Gujarat).

Decision: The committee approved the proposal

(Action: Jadhav Ashok Limbaji, Sci-C, REC Parbhani)

Item No.6: REVIEW OF PROGRESS OF ON-GOING PROJECTS

1. PIB 3632: Evaluation of superior triploid genotypes for yield and adaptability under varied agro-climatic conditions

Decision: The committee has advised to modify the title of the project as "Evaluation of superior mulberry genotypes for leaf yield under bush and tree planting system in different agro climatic conditions". Accordingly it needs to modify the objectives and methodology. Agroclimatic conditions in the different zones of test centers should be recorded. Comparative meteorological data in all the test centers should record and bioassay should be done simultaneously.

(Action: M.K. Raghunath, Sci-D, MBG)

2. PIE13001 MI: AICEM: *Phase-IV: All India Coordinated Experimental Trial in Mulberry Phase-IV*

Decision: The committee noted the progress. It was suggested to adopt standard methods for noting the thrips incidence and to do the bioassay simultaneously for minimum of 5-8 parameters.

(Action: Manjappa, Sci-C, MBG)

3. PIE01022SI: **Evaluation of promising mulberry genotypes for higher leaf yield and resistance to root rot and root knot diseases in Primary Yield Trial**

Decision: The committee noted the progress and approved extension for six months.

(Action: Manjappa, Sci-C, MBG)

4. PIB3633: Development of highly productive and widely adapted mulberry using exotics and wild germplasm

Decision: The committee noted the progress and suggested to modify the title adding the words "against root rot pathogens" and to do the index based hybrid selection.

(Action: Arunakumar G.S., Sci-C, Mul. Path.)

5. PIE 01014SI: Development of Distinctiveness, Uniformity and Stability (DUS) Descriptors for Mulberry (*Morus* spp.) and their Validation - Phase III

Decision: The committee noted the progress.

(Action: Bhavya M.R., Sci-C, Mol. Bio. I)

6. PRP-01015 SI: Identification, evaluation and inclusion of potential antagonistic microbes in Integrated Root Rot Disease Management in Mulberry

Decision: The committee noted the progress and advised to explore the possibility of using existing products developed by ICAR and suggested to note the type of soil, pH, organic content of the samples collected.

(Action: Arunakumar G.S., Sci-C, Mul. Path. and Mol. Bio.I)

7. PPA 01016SI: ***Development of an agronomical package for tree mulberry cultivation for wide acceptance among the Seri-farmers of Southern India***

Decision: The committee suggested to specify the variety, spacing and method of application of fertilizer and to change the title of the project as "Standardization of fertilizer for the tree mulberry cultivation".

(Action: Dhaneshwar Padhan., Sci-B, Agronomy)

8. PIC01007SI: ***Development of protocol for production of medically fit silk (cocoon, sericin, fibroin) for clinical purposes***

Decision: The committee noted the progress. It was suggested to find out the source of contamination in the extraction process of sericin.

(Action: Ravindra., Sci-C, SSC)

9. PPF01017SI: Economics of mulberry sericulture in South India

Decision: The committee noted the progress and advised to include economics of other crops and to study the impact of Covid-19 on sericulture. It was also suggested to present the analysed data.

(Action: Raveendra Mattigatti., Sci-D, SEEM)

10. ARP-01019SI: ***Screening of drugs to inhibit the PI3K-AKT pathway in Bombyx mori for controlling nuclear polyhedrosis virus infection***

Decision: The committee noted the progress and suggested to complete the molecular works in collaboration with SBRL.

(Action: Dr. Mallikarjuna., Sci-C, SWPathology)

11. AIB 01 009 MI: ***Evaluation of new bivoltine double hybrid, TT21 x TT56 at farmers' level for authorization for commercial exploitation***

Decision: The committee suggested to compare the reeling data of TT21xTT56 with FC1xFC2 and approved the extension of project period for six months. Advised for effective utilization of budget. It was also suggested to keep bench mark for the yield for all the hybrids.

(Action: Dr. K. N. Madhusudhan, Sci-D, BBL)

12. AIB 01024 MI: Development of productive, autosexing silkworm breeds/ hybrids of Bombyx mori L. in egg stage and separation of male silkworm population by optical sorting

Decision: The committee noted the progress and advised not to carry out marker based screening. It was also suggested to mention the no. of male and female eggs in each dfls in the presentation. Egg number and cocoon shape should be given more importance in the selection process and to take up gene silencing work in collaboration with SBRL.

(Action: Dr. Kusuma L, Sci-C, BBL)

13. AIE 01026 MI: Evaluation of new bivoltine double hybrid, BFC1xBFC10 at farmers' level for authorization for commercial exploitation

Decision: The committee noted the progress

(Action: Dr. K. B. Chandrashekar., Sci-D, MBL)

14. BPS 01013 CN: ***Utilization and diversification of silkworm pupae products for human & animal consumption and composting.***

Decision: The committee noted the progress. The committee suggested to address the biosafety issues while using the spent pupae and to relook into the data presented on the field evaluation of Tasar Gold.

(Action: Dr. Y. Thirupathaiah., Sci-C, SW Physiology)

15. AIC01023SI: Development of Spectroscopic Tests for Insecticide Resistant Biomarkers in silkworm, *Bombyx mori*

Decision: The committee noted the progress. It was advised to compare gut microbes of *Spodoptera* sp. and *Helicoverpa sp.* resistant to Chlorantraniliprole with silkworm and to standardize the shelf life of the paper strip detecting pesticides. It was also suggested to check the non spinning syndrome due to pesticide residue in the mulberry leaf for which one experiment has to be taken up on silkworm.

(Action: Dr. Satish L., Sci-C, SW pathology)

16. AIB: 01011 S1 – *Development of multivoltine foundation crosses for productivity and high silk percentage*

Decision: The committee noted the progress.

(Action: Dr. K. B. Chandrashekar., Sci-D, MBL)

17. AIB 01004 MI: *Development of multivoltine breeds with improved silk quality utilizing indigenous and exotic bivoltine breeds*

Decision: The committee noted the progress.

(Action: Dr. K. B. Chandrashekar., Sci-D, MBL)

18. **MOE 01021SI: Evaluation of improved technologies of mulberry sericulture in South India.**
Component 1: Evaluation of chawki feed supplement formulation in commercial chawki rearing centre.

Decision: The committee noted the progress. It was suggested to do the statistical analysis of the data and to mention the economics of the technology.

(Action: Dr.E.Bhuvaneswari, Sci-C, Silkworm Physiology)

Component 2: Popularization of G11xG19 double hybrid in Kolar region of Karnataka.

Decision: The committee noted the progress and advised to complete the trial successfully.

(Action: Dr.K.N.Madhusudhan, Sci-D, BBL)

Component 3: Evaluation of productive double hybrid DHP5 at farmers' level.

Decision: The committee noted the progress and advised to analyze the data statistically. The data of FC1x FC2 from the particular area should be compared with the new hybrid .The committee opined that data should be analyzed and egg recovery has to be noted.

(Action: Dr.R.Meenal, Sci-D, BBL)

Component 4: Evaluation of newly developed multiviral diseases tolerant bivoltine hybrid RD1N1

Decision: The committee noted the progress and suggested to check the ERR.

(Action: Dr.L.Sathish, Sci-C, Silkworm Pathology)

Component 5: Evaluation of Cauvery Gold (MV1xS8): An improved crossbreed for cocoon productivity and silk quality

Decision: The committee noted the progress and suggested to draw action plan for large scale multiplication of layings after identifying the farmers for seed rearing. It was suggested to have a meeting with expert breeders to sort out the problems.

(Action: Dr. K. B. Chandrashekar, Sci-D, MBL)

Component 6: Evaluation of robust bivoltine silkworm hybrids suitable for different regions of high temperature and high humidity conditions.

Decision: The committee noted the progress. The high temperature and high humidity should be defined while stating the tolerance.

(Action: Dr. R.Meenal, Sci-D, BBL)

Component 8: Impact of drip irrigation in mulberry productivity

Decision: The committee noted the progress. The committee suggested to include liquid fertilizer in the study.

(Action: Dr.R.Mahesh, Sci-C, Agronomy)

19. PIN 01018 SI: ***Effect of potassium mobilising bacteria Frateuria aurentia on growth and development of mulberry***

Decision: The committee noted the progress and suggested to present the crop performance year wise instead of crop wise. The committee advised to check the data on organic carbon content. It was also suggested to specify the zone where experiment has been conducted in the result.

(Action: Dr. N. Dhahira Beevi., Sci-D, RSRS,Salem)

Item No. 7. Progress of RSRSs, P4 Hassan and SSBS, Conoor

RSRS, Salem

Dr.N.Dhahira Beevi, Sci-D presented the progress of CBT, ECPs and CPP activities and the committee noted the progress. It was suggested to present the data year wise and not crop wise. To manage the papaya mealy bug it was suggested to keep some wild papaya plantation near the mulberry gardens to build up a natural population of *Acerophagus papaya.*

(Action: Dr. N. Dhahira Beevi., Sci-D, RSRS,Salem)

RSRS, Ananthapur

Dr. K.P. Kiran Kumar, Sci-D presented the progress of activities of CBT, ECPs and CPP activities and the committee noted the progress.

(Action: Dr. K.P. Kiran Kumar., Sci-D, RSRS,Salem)

RSRS, Chamrajnagar

Mr. Sivasubramoian, Sci-D presented the progress of activities of CBT, ECPs and CPP activities and the committee noted the progress. It was suggested to present the rearing data.

(Action: Mr. Sivasubramoian., Sci-D, RSRS,Salem)

RSRS, Kodathi

Dr.V. Lakshman, Sci-D presented the progress of activities of CBT, ECPs and CPP activities and the committee noted the progress.

RSRS, Mulugu

Dr.Praveenkumar, Sci-D presented the progress of activities of CBT, ECPs and CPP activities and the committee suggested to take up farm rearing in the station. The scientist informed the house about the Telangana government decision to take up mulberry cultivation as inter crop in the oil palm fields in the initial years.

SSBS Conoor

Dr. V. Vijay, Sci-C presented the progress of activities of the station and the committee noted the progress. The authorization trials of the hybrids developed by Coonoor have to be done and parents has to be given to CSGRC, Hosur.

P4 Hassan

Dr. Dayananda, Sci-D presented the progress of activities of the station and the committee noted the progress. It was suggested to hand over the authorized races to P4 Hassan. It was also suggested to collect feedback from the units where the seed has been supplied by P4 Hassan.

Item No.8. EXTENSION AND OTHER PROGRAMMES

Dr. R. Bhagya, Sci-D, SEEM presented the progress of extension division and the committee noted the progress. The committee suggested the central office to pay a visit to the Jalna area and to use KVKs for extension activities in Baramati. The abiotic stress in Baramati area has to be studied.

Item No. 9. TRAINING (CAPACITY BUILDING AND TRAINING) AND OTHER PROGRAMMES

Dr. Anuradha Jingade, Sci-D presented the progress of the Training Division. The committee noted the achievements.

Item No. 11. ANY OTHER POINTS FOR DISCUSSION- Nil

Suggested to check the presentations of each projects before presenting in the RAC.

CONCLUDING REMARKS BY RAC CHAIRMAN AND MEMBERS

Dr. H. K. Basavaraja, Retd. Director (I/C), CSB, Member

Suggested that productive breeds can be used as working germplasm breeding resource material. While evaluating the breeds the reeling characters must be considered. All presentations should invariably contain one slide on inference based on statistical analysis. Traits such as colour of cocoon, sex limited characters, fecundity etc., can be commercially exploited through biotechnological research. It was suggested to keep a bench mark for each race.

Dr. K. Narayana Gowda, Professor, UAS, Bengaluru

Suggested that the Technology developed should be sound so that farmers will readily accept it He also suggested that while developing a new technology, the relative advantage, innovativeness and complexity of the technology should be taken care. Advised to formulate Extension projects for impact studies and to have collaboration with UAS Bangalore and Chintamani College. It was also opined that CSB may develop a mechanism to avoid duplication of research studies by sericulture colleges, departments of various universities. Suggested to conduct in house seminars to enrich the knowledge on research in the field of sericulture and to explore the possibility of incorporating the Package of practices developed by the agricultural universities in that adopted by CSB.

Prof. S. Janarthanan, University of Madras, Chennai

Insisted on publication of research findings in NAAS rated journals. He suggested to revive IJS/Sericologia journals to have NAAS rating and to be made available online. He opined that there is a need to have inter-institutional interaction to discuss about the various works related to biotechnology/molecular biology areas and may encourage collaborations with other institutions of similar interests.

Dr. Goel, Scientist, APSSRDI (Representative of DoS Andhra Pradesh)

He suggested that CSB may open REC at Chebrulu cluster to cater the neweds of the farmers, to make available the cocoon cutting machines developed by CSRTI-Mysore to grainages in AP under SILK SAMAGRA and to address the root rot disease in mulberry in AP. He also suggested to have collaborative research projects with APSSRDI in the field of breeding and silkworm pathology.

Sri Shankar Reddy, farmers representative

Requested to supply the dfls of TT21xTT56 during summer season to AP.

Director NSSO

Suggested to provide manpower required while giving new breed developed in the institute to NSSO for large scale production for popularization,

Director (Tech)

Suggested to address the field problems in an integrated manner. He advised to propose projects with clear objectives, title and work plan. Advised to conduct one online meeting with

all investigators to interact and clear doubts for the project entitled "Life cycle assessment of mulberry silk: A national assessment" . All scientists are advised to contribute articles to Indian silk which has wide acceptance amnong sericulturists and scientists**.**

Dr.N.K.Krishnakumar, RAC Chairman SBRL Kodathi

Suggested that Investigators should define the hypothesis before taking up any kind of experiment. Climate change should be addressed in the future projects. Suggested to use grafting to overcome the root rot disease. He also opined that the sustainability should be measured and while using byproducts biosafety should be addressed. He advised that the status of soil organisms, water level and soil parameters in the mulberry garden should be tested every year. A minimum of 15-20 papers should be published from the Institute in a year.

Sr. S. B. Dandin

The analysis of the quality of the cocoon from field should be done periodically and Dfl supplied and yield should be studied. He suggested that an alternate breed is the need of the hour. Feed back from other institutions about the breeds should be presented in the progress of the projects . Also suggested that the RSRS should present the interaction between DOS staff in their future presentations.

Dr. S. M. Moorthy, Scientist-D & Head, RCS, Bangalore, Member

Suggested Dr. S. B. Dandin to review the LCA project

Dr. Mahadev B. Chetti, VC, UASD, Dharwad, RAC Chairman

Suggested to include all the suggestions given by the members in minutes without fail. He opined that the improvement of the CSR2 should be done at the earliest. It was advised that farmers needs should be analysed while formulating projects.

General points

The committee advised the scientists to make simple ppt with self explanatory tables and graphs and also to have high resolution photographs.

Chairman felt that there is a need improve the R&D activities of the institute in this regard he advised the Director to utilize the expertize of Dr. H. K. Basavaraj and Dr. S. B. Dandin and to invite them during institute RC meetings to examine the progress of research work and also to guide the scientists.

The meeting ended with vote of thanks to the Chair.

(Dr. Mahadev B.Chetti)
RAC,CHAIRMAN and Vice Chancellor,
University of Agricultural Sciences (UASD)
Dharwad

Annexure-I

List of Members attended 48th Meeting of RAC held on 28th & 29th September 2022

#	Name of the Member
1	Dr. Mahadev B. Chetti, Vice Chancellor, UAS, Dharwad- Chairman
2	Dr. Babulal Director CSRTI-Mysuru Member Convener
3	Dr. H. K. Basavaraja, Director (I/C) (Rtd.), CSB, Bengaluru -Member
4	Prof. (Dr.)S. Janarthanan, University of Madras, Chennai - Member
5	Dr. S. B. Dandin, Ex-VC (Retd.), UHS Baghalkote - Invitee
6	Dr. N. K. Krishna Kumar, Retd. Retd.DDG(Horti.) - Invitee
7	Dr. Kariyappa representing Director, CSTRI Bengaluru - Invitee
8	Dr. B.T. Sreenivasa, Dir(Tech.) CSB, Bengaluru - Member
9	Dr. S. M. Moorthy, Sci-D and Head, RCS, CSB, Bengaluru - Member
10	Dr. Mohan Shanbogue, Sci-D, representing Dir(NSSO)
11	Mr. Y. Shankar Reddy, Farmer, Palamaner, AP- Member
12	Dr. K. Narayanagowda, UAS, GKVK, Bengaluru- Member
13	V. Babu, DD(TNSTI Hosur), representing DoS TN
14	K. Meghala, JD(DOS, Mysuru), representing DoS Karnataka -Member
15	Representative DOS, Madhya Pradesh, Bhopal- Member
16	Dr. A.K. Goel, , Scientist, APSSRDI, Hindupur, Representative DoS AP- Member
17	Dr. E. Sreenivasa Rao, Principal Scientist, IIHR, Bengaluru- Member(absent)
18	The Commissioner, DOS. Maharastra- Member(absent)
19	The Commissioner, DOS. Telengana- Member(absent)

List of participants of Institute & Nested units attended 47th Meeting of RAC held on 24th & 25th January 2022

#	Name & Designation	#	Name & Designation
1	Dr.MaryJosepha SheryA.V,Sci-D, CSRTI, Mysore	29	Mrs. Bhavya M. R. Sci- B CSRTI, Mysore
2	Dr.K.B. Chandrashekar, Sci-D CSRTI, Mysore	30	Dr. K. N. Madhusudhan Sci -D CSRTI, Mysore
3	Dr. Raghunath M.K. Sci-D CSRTI, Mysore	31	Dr. Bhuvaneshwari , E. Sci-C CSRTI, Mysore
4	Dr. C. M. Babu Sci -D CSRTI, Mysore	32	Dr. Anuradha H.Jingade Sci-D CSRTI, Mysore
5	Mr.Sanath kumar Sci-D CSRTI, Mysore	33	Dr. Kusuma L. Sci-C CSRTI, Mysore
6	Dr. Thirupathaiah Y. Sci-C CSRTI, Mysore	34	Dr. Tanmoy Sarkar. Sci-C CSRTI, Mysore
7	Dr. Satish L Sci-C CSRTI, Mysore	35	Dr. Ravindra Sci-C CSRTI, Mysore
8	Mr. Shivakumar Hukkeri Sci-D CSRTI, Mysore	36	Chanadrasheksr M.N. Sci-D, Mysuru
9	Dr. S. Mahiba Helen Sci-D CSRTI Mysore	37	Dr. Amit Kumar, Sci-C, Mysuru
10	Dr. Manjappa Sci-C CSRTI, Mysore	38	Dr. Nitin K.S. Ast. Prof. NIE
11	Dr. Dhaneswer Padhan Sci- B CSRTI, Mysore	39	Mr. Azad Gul, STA
12	Dr. S. Balasaraswathi Sci-D CSRTI, Mysore	40	Sri. M. Dandapani, AD(Comp)
13	Dr. Ranjini M. S Sci-C CSRTI Mysore	41	Sri. A. N. Suresh, AD(Est.)
14	Dr. Arunakumar G. S. Sci-C CSRTI, Mysore	42	K.Gayathiri, AD(Stores)
15	Dr. Mahesh R. Sci -C CSRTI, Mysore	43	Mr. Kuldeep B, PA
16	Dr. Mallikarjuna G. Sci-C CSRTI, Mysore	44	Ms. Megha H. T. PA
17	Mr. H.M. Munikrishnappa AD, CSRTI, Mysore	45	Chaitra S., PA
18	Dr.G.S.Geetha, SRA(SS), CSRTI, Mysore	46	Chandini S., PA
19	Dr.R.Bagya, Sci-D CSRTI, Mysore	47	Sindhu D.G., PA
20	Dr. Gayathri .T, Sci-C CSRTI Mysore	48	Harshitha C., PA

21	Dr. Divya Singh Sci- B CSRTI, Mysore	49	Chanadana R., PA
22	Dr. Shivakumar, Sci-C, Mysuru	50	Harshitha R., PA
23	Dr. Sobhana V Sci-C CSRTI, Mysore	51	Harshitha K.M., PA
24	Rekha M., DD(Stat)	52	Gowtham K, JRF
25	P. Sowbhagya, SRF	53	Kishore Kumar B., PA
26	Nisarga N. R., JRF	54	Shashidar S., PA
27	Raveendranath H. R., PA	55	Mr. Mahesh M.R. JRF
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3	Dr. V. Lakshmanan, Sci-D, RSRS Kodathi	14	Dr. G. K. Daniel, Sci-D, REC Hoshanagabad
4	Dr.Sathish Kulkarni, Sci-D, RSRS, Kodathi	15	Dr. Ramprakash, Sci-D, REC Auranabad
5	Mr. Sivasubramaniayan, Sci-D RSRS, Ch. Nagar	16	Dr.Ashok Jadhav Limbali, , Sci-C, REC Parbhani
6	Dr. Praveenkumar, Sci-D, RSRS, Mulugu	17	Mr. Y. Humayun Sharif, Sci-D, REC Baramati
7	Dr.V.K.Yadav, Sci-C, RSRS, Mulugu	18	Dr. Umesh, Sci-C, REC Koppal
8	Dr.K.P.Kiran kumar Sci-D RSRS Ananthapur	19	Dr. E. Rajalakshmi, Sci-D, REC Gobi
9	Dr.M.Venktachallapathi,Sci-D,REC, Palamaner	20	Dr. K. Jhansilakshmi, Sci-D, REC Krishnagiri
10	Dr.Y.Srinivasualu Sci-D, REC,Chitradurga	21	Dr. V. Vijay, Sci-C, SSBS, Conoor
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