

Dr. Mahesh D S

Scientist-C & Unit Incharge

CSB-Research Extension Centre (REC)

(Under CSB-CMER&TI)

Central Silk Board, Ministry of Textiles, Government of India

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Date of Birth: 06/11/1990

**Research Interest**

- *Silkworm rearing and seed production technologies.*
- *Improvement of silkworms and their host plants.*
- *Value addition and by-product utilization in sericulture.*
- *Research Extension and technology transfer at the farmers' level.*

Education & Qualifications

- *Ph.D. in Sericulture*, University of Agricultural Sciences (UAS), GKVK, Bengaluru (2017)
- *M.Sc. (Agri.) in Sericulture*, UAS, GKVK, Bengaluru (2014)
- *B.Sc. (Agriculture)*, College of Agriculture, V.C. Farm, Mandya (UAS, GKVK) (2012)

Professional Experience

- *Scientist-C & Unit In-charge*, Central Silk Board – Research Extension Centre (CSB-REC), Ahmedabad, Gujarat (under CSB-CMER&TI, Lahdoigarh, Assam), Ministry of Textiles, Government of India (16 June 2025 – Present).
- *Scientist-C*, Central Silk Board – Central Muga Eri Research & Training Institute (CSB-CMER&TI), Lahdoigarh, Jorhat, Assam, Central Silk Board, Ministry of Textiles, Government of India (1 July 2022 – 15 June 2025).
- *Scientist-B*, Central Silk Board – Central Muga Eri Research & Training Institute (CSB-CMER&TI), Lahdoigarh, Jorhat, Assam, Central Silk Board, Ministry of Textiles, Government of India (1 November 2018 – 30 June 2022).
- *Scientist (Sericulture)*, Krishi Vigyan Kendra (KVK), V.C. Farm, Mandya, Karnataka (2017 – 31 October 2018).
- *Junior Research Fellow (JRF)* with PhD, Department of Biotechnology (DBT)-Funded Sericulture Research Project, Department of Sericulture, University of Agricultural Sciences (UAS), Bengaluru, Karnataka (2014-2017).

Special Achievements

- Pioneered the development of castor-based eri sericulture in Gujarat (the non-traditional state) by developing and standardizing location-specific production technologies, leading to the state's first commercial eri raw silk production during 2025-26.

- Standardized chawki rearing technology in ericulture for the first time, resulting in improved larval uniformity and survivability, and achieving approximately 20% enhancement in cocoon productivity.
- Developed and standardized improved platform-based late-age eri silkworm rearing technology and improved mounting methods for large-scale commercial cocoon production.
- Identified the Borduar eri race as the most suitable for Gujarat agro-climatic conditions and standardized scientific rearing systems for different Disease-Free Laying (DFL) capacities.
- Developed commercial-scale loose egg production technology in ericulture for enhancing the production and timely supply of quality Disease-Free Layings (DFLs).
- Initiated research on value addition and utilization of eri silkworm pupae through collaborative programmes with the CSIR–Central Food Technological Research Institute (CFTRI) and the National Meat Research Institute (NMRI).
- Successfully conducted multi-location field demonstrations and facilitated large-scale technology transfer to eri farmers in the North-Eastern Region, particularly in Assam and Nagaland, contributing to improved productivity and enhanced farmer income.
- Published more than 30 research papers in national and international journals and authored the first-ever “*Handbook of Eri Culture*” and *Manual on “Eri Chawki Rearing Technology”*, along with several research articles and farmer-oriented extension publications.

R&D related activities

R&D Projects as Principal Investigator (PI): 04

- Integrated Baseline Research on Castor-Based Sustainable Ericulture Development in Gujarat, funded by the Central Silk Board (CSB), Government of India (2026–2029; Project Outlay: ₹90.59 lakh).
- Evaluation, Optimization and Popularization of Ericulture Practices in Castor-Growing Areas of Gujarat, funded by the Central Silk Board (CSB), Government of India (2024–2026; Project Outlay: ₹86.94 lakh).
- Standardization of Chawki Rearing Practices for Eri Silkworm, funded by the Central Silk Board (CSB), Government of India (2019–2022; Project Outlay: ₹18.15 lakh).
- Development of Commercial Egg Production Technology in Ericulture, funded by the Central Silk Board (CSB), Government of India (2021–2024; Project Outlay: ₹13.49 lakh).

R&D Projects as Co-Principal Investigator (Co-PI): 02

- Advanced-Level Institutional Biotech Hub at CSB–CMER&TI, Jorhat, Assam (Phase II), funded by the Department of Biotechnology (DBT), Government of India (2023–2026; Project Outlay: ₹57.81 lakh).
- Utilization of Silkworm Pupae for Human and Animal Consumption and Compost Production, funded by the Central Silk Board (CSB), Government of India (2021–2025; Project Outlay: ₹155.02 lakh).

R&D Projects as Co-Investigator (Co-I): 06

- Optimization of Preservation Techniques and Quality Assessment of Mulberry and Eri Silkworm Pupae for Human Consumption, funded by the Central Silk Board (CSB), Government of India (2024–2026; Project Outlay: ₹41.00 lakh).

- Muga and Eri Silkworm Disease Monitoring in the North-Eastern States of India, funded by the Central Silk Board (CSB), Government of India (2022–2026; Project Outlay: ₹41.00 lakh).
- Breeding of Muga Silkworm for Improved Silk Quality and Disease Tolerance, funded by the Central Silk Board (CSB), Government of India (2020–2024; Project Outlay: ₹18.32 lakh).
- Development of Honeycomb Mountages for Enhanced Muga Silk Production, funded by the Central Silk Board (CSB), Government of India (2020–2023; Project Outlay: ₹10.95 lakh).
- Biology and Management of Predators of Muga Silkworm, funded by the Central Silk Board (CSB), Government of India (2018–2021; Project Outlay: ₹9.40 lakh).
- Evaluation and Popularization of Technologies in Vanya Sericulture, funded by the Central Silk Board (CSB), Government of India (2019–2022; Project Outlay: ₹19.39 lakh).

Professional Memberships, Committees and Nodal Responsibilities (Selected only)

- Member, Internal Committee constituted for formulation of beneficiary-oriented components under the proposed beyond Silk Samagra-2 scheme for the Eri and Muga sectors.
- Nodal Officer for implementation of Central Seed Act activities in Gujarat state under Central Seed Act Secretariat, Central Silk Board, Ministry of Textiles, Govt. of India (Dec. 2025-present).
- Nodal Officer (CSB–CMER&TI) for the Directorate of Handloom, Textiles & Handicrafts, Government of Odisha, providing technical guidance under Silk Samagra-2 scheme.
- Nodal Scientist for Mera Resham Mera Abhiman (MRMA 1.0 and MRMA 2.0) for Gujarat State (Bansakantha and Mehsana Districts).
- Nodal Officer for 4 Sericulture Resource Centres (SRCs), 4 Demonstration Rearing Centres (DRCs), and 3 Chawki Rearing Centres (CRCs) established for the development of castor-based eri sericulture in Gujarat.
- Life Member, National Academy of Sericultural Sciences, India (NASSI).
- Life Member, Assam Science Society.
- Life Member, Association for Environment Development and Sustainability (AEDS).
- Life Member, Dr. S. B. Dandin Foundation for Education and Research.

International Participations

- International Congress of Entomology (ICE 2024), Kyoto, Japan.
- Participated in the Central Silk Board's international delegation to Vietnam (VGSF-2026 & VIVC-2026) to explore advanced sericulture technologies, research and industrial practices.

Publications:

- *Peer-reviewed Research Papers: 30+*
- *Books and Manuals: 3*
- *Book Chapters: 10+*
- *Technical Bulletins, Extension Booklets, Leaflets and Pamphlets: 10+*
- *Popular Articles: 5+*
- *Research Abstracts: 10+*

- *Audio-Visual Documentaries: 10+*
- *Invited Presentations and Participation in National & International Conferences, Seminars, Workshops and Training Programmes: 10+*

Selected Publications:

- Mahesh, D.S., Chandrakumara, K., Keerthi, M.C., Arunkumar, K.P., & Neog, K. (2026). Standardization of rearing protocol for sustainable eri silk production in India using *Ricinus communis* and *Ailanthus grandis* through an age-stage, two-sex life table approach. *Journal of Environmental Biology*, 47, 105–113.
- Shelhring, R.D., Harisha, R., Selvaprakash, R., Mahesh, D.S., et al. (2026). Evaluation of preservation methods on the physical, sensory and microbial quality of eri silkworm (*Samia ricini*) pupae. *Journal of Scientific Research and Reports*, 32(7), 761–773.
- Mahesh, D.S., Arunkumar, K.P., Hazarika, S., et al. (2025). Chawki rearing technology in ericulture enhances productivity and profitability: Evidence from North-Eastern India. *Indian Journal of Sericulture* (Accepted).
- Mahesh, D.S., Hazarika, S., Hazarika, D.J., Mishra, J.R., Arunkumar, K.P., et al. (2023). Selection of castor (*Ricinus communis*) cultivars suitable for commercial eri chawki rearing. *Plant Archives*, 23, 105–110.
- Borah, L., Subrahmanyam, G., Gogoi, D.J., Mahesh, D.S., et al. (2023). Cross-transmission of a microsporidian pathogen from muga silkworm to eri silkworm. *Sericologia*, 62(2), 96–105.
- Mahesh, D.S., Arunkumar, K.P. (2020). Status of ericulture in Northeast India. *Insect Environment*, 22, 68–69.
- Mahesh, D.S., Arunkumar, K.P., Kumar, A., et al. (2021). Leafhopper (*Empoasca flavescens*): A major pest of castor affecting ericulture in Northeast India. *Biological Forum – An International Journal*, 13(3), 617–620.
- Mahesh, D.S., Jigyasu, D.K., & Shabnam, A.A. (2024). Handbook of Ericulture. Central Muga Eri Research & Training Institute, Central Silk Board. ISBN: 978-81-972337-4-6.
- Mahesh, D.S., Arunkumar, K.P., & Vijaya Kumari, K.M. (2024). A Manual on Eri Chawki Rearing. CSB-CMER&TI, Central Silk Board. ISBN: 978-81-959292-6-9.
- Kaisa, K., Tiwari, J., Mahesh, D.S., Shah, S., & Arunkumar, K.P. (2024). Biotechnological Approaches in Wild Silk Culture. In *Biotechnology for Silkworm Crop Enhancement: Tools and Applications*. Springer.

Awards & Recognition

- Central Silk Board Best Scientist Award (R&D) – 2025, conferred by the Central Silk Board, Ministry of Textiles, Government of India, for outstanding contributions in research & development during the preceding five years at CSB-CMER&TI.
- Appreciation Award, 2025 – Conferred by the Member Secretary, Central Silk Board, for exemplary contributions to the successful implementation of the Gujarat Eri Project.
- Appreciation Award by the Joint Secretary (Technical), Central Silk Board, for valuable contribution and dedicated efforts in successful implementation of Mera Resham Mera Abhiman (MRMA 1.0) during 2025-26.
- Best District Performance Award (MRMA Campaign), 2025 – Awarded by the Central Silk Board for exemplary leadership as Nodal Scientist in the successful implementation of castor-based eri sericulture in Banaskantha District, Gujarat.
- Presentation Award for Young Scientists (PAYS), 2024 – International Congress of Entomology (ICE 2024), Kyoto, Japan.

- Appreciation Award, 2021-22 – Awarded by CSB-CMER&TI for contributions to research and the popularization of “Commercial Eri Chawki Rearing Technology”.
- Young Scientist Award, 2020 – International Conference on New Trends in Agriculture, Environmental & Biological Sciences for Inclusive Development, AEDS.
- University Gold Medal (Ph.D.), 2017 – University of Agricultural Sciences (UAS), Bengaluru, for outstanding academic performance in the doctoral programme.
