

BIO DATA AND SIGNIFICANT ACHIEVEMENTS



**DR. NARISSETTY BALAJI CHOWDARY,
DIRECTOR,
Central Tasar Research and Training Institute,
Central Silk Board, Ministry of Textiles, Govt. of India,
Piska Nagri – 835303, Ranchi, Jharkhand, India.**

BIO DATA OF DR. NARISSETTY BALAJI CHOWDARY, DIRECTOR

1. Name : **Dr. NARISSETTY BALAJI CHOWDARY**
2. Employee No. : **04315**
3. Designation : Director
4. Place of Posting : Central Tasar Research and Training Institute,
Central Silk Board, Ministry of Textiles,
Govt. of India, Piska Nagri - 835303,
Ranchi, Jharkhand, India.
5. Date of birth : 15.01.1966
6. Total Service : 25 years
- a) Research & Training: 14 years
- b) Extension : 08 years
- c) Seed : 03 years
7. Specialization : Microbiology & Plant Pathology
8. Educational Qualification :

Highest Degree	Year	University	Class	Specialization
B.Sc.	1986	Gulbarga University Gulbarga	Ist class	Botany, Zoology, Chemistry,
M.Sc.	1988	-do-	I st Class, I st Rank & Gold Medalist	Microbiology
Pre-Ph.D	1990	-do-	-	Microbiology (Wine Technology)
Ph.D.	2007	University of Mysore Mysore	-	Applied Botany (Plant Pathology)

9. Trainings Undergone:

Course Name/ Subject	Address of Institute	Duration	Period	Sponsoring Agency
Intensive Bivoltine Training	CSRTI, Berhampore	45 days	15.1.91 to 27.2.91	CSB, Bangalore
Computer Training	Premier Computer Consultancy Services, Bangalore	6 days	19.4.93 to 24.4.93	CSB, Bangalore
Extension management Programme	Essae Chandran Institute, Bangalore	3 days	23.9.93 to 25.9.93	CSB
Extension education and programme management	CSRTI, Mysore	5 days	4.4.94 to 8.4.94	CSRTI Mysore
Training in mass multiplication of <i>Nesolynx thymus</i> and <i>Cryptolaemus montrouzieri</i>	- do -	6 days	26.9.94 to 1.10.94	-do-
Silkworm disease control technology	-do-	10 days	12.10.95 to 21.10.95	-do-
Bivoltine silkworm rearing	-do-	35 days	20.11.95 to 12.12.95	-do-
Computer fundamentals and MS office	Software Technology Group International Ltd.	6 days	22.5.2000 to 27.5.2000	-do-
Indian Standard Quality Management Systems requirements Training Programme	Creative Quality Consultants, Bangalore	1 day	19.11.2004	-do-
ISO 9001 – 2000 Internal Auditors Training Programme	Creative Quality Consultants, Bangalore	2 days	14 to 15.06.2005	-do-
Training Programme on Organic Certification of Organic Products	Association for Promotion of Organic Farming, Bangalore	4 days	8.03.2006 to 11.03.06	-do-
Biotechnological approaches for the utilization of yeast and fungi	CFTRI, Mysore	5 day	2.2.09 to 6.2.09	-do-
Genetic Enhancement in Field Crops for Input Use Efficiency and Toleranceto Abiotic stresses	CCS Haryana Agricultural University, Hisar	21 days	October 15 to November 4, 2009.	ICAR sponsored Winter School
Climate variability and its impact on crop production- Physiological perspective towards mitigation strategies.	Assam Agricultural University, Jorhat	21 days	23.08.2011 to 12.09.2011	ICAR sponsored Summer School
Cluster Promotion Programme	CSR&TI, Mysuru	3 days	29.5.2013 to 31.5.13	CSRTI Mysore
Orientation Training	CSR&TI, Mysuru	10 days	1.7.2013 to 10.7.2013	CSRTI Mysore
Orientation Training	CSR&TI, Mysuru	3 days	22.8.2013 to 24.8.2013	CSRTI Mysore

10. Experience:

Organisation/ Institute	Capacity/ Designation	Duration	Period	Subject/ Area	Significant Achievement
Department of Microbiology Gulbarga University.	Guest Lecturer	1 year	1989-1990	Soil Microbiology	Teaching Microbiology course to M.Sc students
P3 Basic Seed Farm NSSP, Ambarifalakata Jalpaiguri, W. B.	Senior Research Assistant	2 year 7 months	1990-93	-	Farm management rearings and grainage works
Research Extension Centre Madakasira, Anantapur (Dt),A.P.	-do-	4 months	1993	-	Extension education and transfer of technologies.
Research Extension Centre Hindupur,A.P.	- do -	3 year 1 month	1993-1996		Extension education and transfer of technologies.
Research Extension Centre, Eluru, West Godavari (Dt), A.P.	-do-	8 months	1996-1997	-	- do -
Grainage Extension Centre,NSSP, Palamaner, Chittoor (Dt), A.P.		1 year 9 months	1997-1999	-	Organizing LR and FR seed cocoon rearings, Extension education and TOT
Molecular Biology CSRTI, Mysore	SRA	1 year 5 months	1999-2000	Microbial techniques	Worked in DBT funded RFLP project
Silkworm Physiology CSRTI, Mysore	SRA/SRO	9 months	2000-2001	Microbiology	Isolation 17 Gram +ve and 8 Gram -ve bacteria for producing protease enzyme through microbial fermentation using sericultural wastes.
Molecular Biology CSRTI, Mysore	SRO	1 year 1 month	2001-2002	Microbial techniques	Associated in finding out of 8 RFLP markers responsible for high cocoon shell ration in silkworm, <i>Bombyx mori</i> .

Mulberry Pathology CSRTI, Mysore	Senior Research Officer / Scientist -C	7 years 2 month	2002- 2009	Microbiology	Workdc on mulberry diseases with special reference to soilborne plant pathogens. Identified the root rot pathogens & predisposing factors for the outbreak of the disease. Identified the Disease complex in mulberry due to nematode and soilborne pathogen interaction.
Mulberry Physiology CSRTI, Mysore	Scientist -C	13.8.200 9	15.5.2012	Patho- physiology of plant diseases Stress physiology Nutrient Use Efficiency	Three parameters viz, leaf temperature, phenol content and total carbohydrates have been identified as physiological and biochemical markers for screening of mulberry genotypes for root rot resistance.
Mulberry Breeding and Genetics CSRTI, Mysore	Scientist -C	16.5. 2012	31.5.2013	Disease resistant breeding and Developing DUS descriptors for mulberry	Disease resistant breeding, identified root rot resistant and susceptible accessions.
Research Extension Centre Sub Unit, Central Silk Board, Ministry of Textiles, Govt. of Inida, Giddalur - 523 357, Prakasam Dt., AP, India	Scientist-C/D	1.6.2013	Till date	Extension	Extension education, training of man power for sustainable sericulture

11. Projects pursued:

A] Completed projects with important contributions of the scientist:

Project title	Period	Important contributions of the scientist
Restriction Fragment Length Polymorphism analysis for cocoon shell ratio and NPV resistance in silkworm <i>Bombyx mori</i> . (DBT sponsored project)	1999-2000	Involved in finding out of 8 RFLP markers responsible for high cocoon shell ration in silkworm, <i>Bombyx mori</i> .
Utilization of mulberry sericultural wastes to produce some valuable by products	2000-2001	Isolation of 17 Gram +ve and 8 Gram -ve bacteria for producing protease enzyme through microbial fermentation using sericultural wastes.
Establishment of linkage of RFLP markers with conventional linkage groups	2000-2001	Established that there is no linkage between RFLP markers with conventional markers in

in Silkworm, <i>Bombyx mori</i> .		silkworm, <i>Bombyx mori</i> .
Investigation on the association of fungal and bacterial pathogens with root knot nematode disease complex and their management in mulberry	2002- 2005	Found out the involvement of disease complex in mulberry manifested by root knot nematodes and soilborne pathogens and worked out the strategy for their management.
Sustainable sericulture development through integrated nutrient, pest and disease management in South India. Farmers' participatory mode (Collaboration with SJRF, Chennai)	2002-2007	Demonstrated various technologies on integrated nutrient, pest and disease management in South India and established the effectiveness of integrated technologies to boost sericultural productivity for the benefit of farming community.
Effectiveness of <i>Pseudomonas fluorescens</i> for the control of root rot disease in mulberry	2003-2004	Evaluated the efficacy of <i>P. fluorescens</i> for control of root rot and recommended the integration of <i>P. fluorescens</i> with <i>Trichoderma harzianum</i> for effective management of root rot disease
Investigation on predisposing factors for out break of Root rot of mulberry and disease management with Special emphasis on use of biocontrol agents and Botanicals	2003-2006	Identified the predisposing factors responsible for the outbreak of root rot disease and suggested the disease management by application of region specific antagonistic agents.
Studies on the incidence crop loss and management of root rot disease of mulberry in Tamil Nadu	2003-2006	Studied crop loss and management of root rot disease under field conditions of Tamil Nadu.
Fortification of sericultural compost and vermicompost and their effects on mulberry cultivation.	2003-2007	Microbially enriched (phosphate solubilizing bacteria, rock phosphate, <i>Azotobacter</i> , <i>T. harzianum</i> , <i>T. pseudokoningii</i> and neem oil cake) seri compost was found significantly effective in improving qualitative mulberry leaf yield.
Impact of microbially enriched compost on suppression of soilborne diseases of mulberry	2003-2007	Microbially enriched seri compost was found effective in controlling the root knot and root rot diseases to an extent of 80.7 and 74.3 %, respectively over the control.
Alternative uses of mulberry	2004- 2007	Developed "Spoorthi" mulberry leaf health drink. Exploited mulberry leaf as protein rich food source for inclusion in human diet.
Technology validation of Spoorthi mulberry leaf health drink	2005-2006	Clinically tested "Spoorthi" and found effective in reduction of diabetes and hypertension.
Identification of physiological and biochemical markers associated with root rot resistance in mulberry	2007-2010	Three parameters viz, leaf temperature, phenol content and total carbohydrates have been identified as physiological and biochemical markers for screening of mulberry genotypes for root rot resistance. 5 tolerant (Hungarian, Himachal local, Ber. 20, Almora local & Local ♂) and 5 susceptible (Ber. C 776, S 30, Sujanpur 5, V 1 & S 54) mulberry genotypes have been identified in the project, which will be utilized as parents for root rot resistance breeding.

Screening of bio-remedial methods for management of pathogens in infested soils	2008-2009	Maximum reduction in population of pathogens causing nursery, root knot and root rot diseases were recorded in the treatments like soil solarization (78–81.5 %) followed by mulching of neem leaves (72.3-75.6%), raising of Dhaincha crop (65-69%) and deep digging upto 30 cm (63-65%) from infested soils and these treatments were selected for developing the integrated package to take up the new mulberry plantations.
Induction of systemic resistance in mulberry against major diseases through chemical and biological agents.	2008-2009	Results revealed that chemicals C- 2 (Salicylic acid) and C-5 (Calcium nitrate) exhibited upto 76.81 % reduction in foliar diseases through foliar application where as upto 74.5 % through soil application. In case of soilborne diseases, chemicals viz., C-2 & C-5 reduced the soilborne diseases up to 63.0 and 62.0% by foliar application whereas 79.2 and 78.5 % by soil application, respectively over control.
Screening and identification of efficient lignolytic/cellulolytic microbes for effective decomposition of seri residue PRP- 3374.	2006-2010	14 fungal isolates exhibited positive results for cellulolytic activity and five isolates for lignolytic activity. These isolates were further screened for 3 major enzymes (laccase, lignin peroxidase & manganese peroxidase). Among them, two isolates (<i>Pleurotus florida</i> & <i>P. ostreatus</i>) exhibited positive results and were found non-pathogenic to mulberry.
Disease forewarning/forecasting XI plan CSB project 2107	2008-2009	Prepared the project in consultation with Central Research Institute for Dry Land Agriculture (CRIDA), Hyderabad and initiated the data collection on diseases and pests and meteorological data at field level.
Preliminary studies for assessing carbon credit in mulberry production	2009-2010	A total of 10 crop data were collected on shoot, leaf produced in an area of about 0.5 acre and carbon content measured. Based on the data analysis total carbon sequestered in mulberry is estimated as 19.59MT/ha/yr
Validation of foliar application of macro and micro nutrient formulation to mitigate the nutritional deficiencies in mulberry	2010-2011	Only one foliar spray of Poshan is recommended which results in improvement of leaf quality (total proteins – 45.93 %; total sugars – 46.34 % & leaf moisture content – 20.98 %) and reduction in leaf yield loss up to 30.77 % in comparison to nutrient deficient control.
Development of diagnostic kit for identification of nutrient deficiencies in mulberry and to assess the leaf quality	2010 – 2011	Brix values were recorded using Refractometer for the first time in mulberry to find out the leaf quality based on Brix readings. The results indicated that the values of Brix ranged from 3 – 11 % in sap juice and 2 – 10 % in leaf samples.

		Developed a simple and easy rapid qualitative tests to identify the deficiency of nitrogen, phosphorus, calcium, magnesium and iron in mulberry.
Studies on the factors influencing the nutrient uptake and its use efficiency in mulberry under field conditions studies on the factors influencing the nutrient uptake and its use efficiency in mulberry under field conditions	July, 2010 – June, 2013	Identified the factors influencing the nutrient uptake and its use efficiency in mulberry
Maintenance of mulberry germplasm	2012-13	Maintained different accessions of mulberry with recommended package of practices
All India Coordinated experiment of mulberry Phase III	2011-13	Established experimental plot at CSRTI, Mysore and maintained the plots with recommended package of practices
Development of disease resistant and productive mulberry genotypes with special reference to root rot and root knot diseases suitable to the seri zones of South India	2012-13	The accessions Vietnam-2, Cuckpilla and MR2 were found relatively tolerant to root rot. The accession S30 was found relatively resistant to root knot disease.
Maintenance of breeders seed plots	2012-13	Maintained different accessions of mulberry with recommended package of practices
On Farm Trial of Neemahari- A plant based formulation for management of root knot disease of mulberry	2013-15	The efficacy of Neemhari was tested at field level and found effective for management of root knot nematode in mulberry.

12. Seminars/Symposia/Workshops attended

- ✓ 30th Annual Conference of **Association of Microbiologists of India** held at Annamalai University, Annamalai Nagar, during 9 – 11th Jan, 1990.
- ✓ **All India Scientific /Technical seminar (Rajabhasha)** held at Defence Food Research Laboratory (DRDO), Mysore during 6-7th April, 2000.
- ✓ Seminar on **Sericulture technology: An appraisal** held at CSR & TI, Mysore during 6-7th June, 2000.
- ✓ **National Symposium on Plant pathogens diversity** in relation to plant health held at Osmania University, Hyderabad, Jan 16-18th, 2003.
- ✓ National Conference on **Tropical Sericulture for Global competitiveness** held at CSRTI, Mysore during 5-7th Nov, 2003.
- ✓ National Seminar on **Disease and Pest management in Sericulture** held at Sericulture College, University of Agricultural Sciences, Chintamani, Sept. 12-13th, 2003.
- ✓ Workshop on **Forewarning system for Pests and Diseases** of Mulberry and Silkworm, CSRTI, Mysore on 08.12.2003.

- ✓ National Symposium of **Recent Trends in Applied Biology** held at Avinashilingam Deemed University, Coimbatore during 28-29th Jan, 2004.
- ✓ National Seminar on **Composting and Vermicomposting** held at CSRTI, Mysore on 26-27th Oct, 2005.
- ✓ UGC sponsored National Seminar on **Scenario of Sericulture in India** held at S.P. Mahila Visvavidyalayam, Tirupati on 25th and 26th March, 2005.
- ✓ **Brainstorming session on mulberry root rot**, Centre for Plant Protection Studies, Tamil Nadu Agricultural University, Coimbatore on 09.08.2005.
- ✓ Review meeting on **Net Work Trial on root rot management** in mulberry, Centre for Plant Protection Studies, Tamil Nadu Agricultural University, Coimbatore on 30.08.2006.
- ✓ National Seminar on **Training and Technology Awareness for Women Sericulturists** held on 16th and 17th March, 2007 at CSRTI, Mysore.
- ✓ **National Conference on Medicinal & Aromatic Plants** held at Institution of Agricultural Technologists, Bangalore during 19 to 21st April 2007 organized by Ganga Kaveri Institute of Science & Management and Mediherbs Research and Development Foundation, Bangalore.
- ✓ UGC sponsored National Seminar on **Functional Foods for Health Promotion and Disease Prevention** held at held at University of Mysore during 14th and 15th February 2008 organized by Department of Studies in Food Science & Nutrition, University of Mysore, Mysore.
- ✓ 30th Annual Conference and Symposium on **Advances in Biotechnology for Plant Protection** held at held at University of Mysore, Mysore during 17th –19th November 2008 organized by University of Mysore & Indian Society of Mycology and Plant Pathology, Udaipur.
- ✓ National workshop on **Seribiodiversity Conservation** at CSGRC, Hosur during 7th & 8th March 2009 jointly organized by National Biodiversity Authority, Chennai and CSGRC, Hosur.
- ✓ **Farmers work shop – 2010** at CSR&TI, Mysore on 28.01.2010.

- ✓ Seminar on “**Recent trends in packaging of agricultural produces**” organized by Merck & Association of Microbiologists of India at CFTRI, Mysore on 26.02.2010 Seminar on “Recent trends in packaging of agricultural produces” organized by Merck & Association of Microbiologists of India at CFTRI, Mysore on 26.02.2010.
- ✓ **Farmers work shop** at Sangareddy, Medak Dt., A.P. on 19.03.2010.
- ✓ National Seminar on “**Energy Management and Carbon Trading in Dairy Industry**” during June 5-6, 2010 organized by Anand Agricultural University, Anand, Gujarat.
- ✓ Golden jubilee **National Conference on Sericulture Innovations: Before and beyond** held at CSRTI, Mysore during January, 28-29, 2011.
- ✓ **Sericulture workshop** at Belgaum on 05.03.2011.
- ✓ **Workshop on Innovative sericulture farmers** held at CSRTI, Mysore on 16.12.2011.
- ✓ **Sericulture workshop** at Raichur on 5.1.2012
- ✓ Brainstorming session on **Cluster promotion programme** RKVY & MGNREGA held at CSRTI, Mysore on 30th and 31st January 2012.
- ✓ **Interactive Workshop** on Quality cocoon production/Brainstorming session on mounting technology held at CSRTI, Mysore on 1.2.2012.
- ✓ Brainstorming workshop on **Nano technology** on 10.10.2012.
- ✓ Workshop on **Bioinformatics and its applications** during 29th and 30th November, 2012 at CSRTI, Mysore sponsored by DBT, New Delhi.
- ✓ **Sericulture workshop** at Bagalkote on 5.1.2012
- ✓ **Sericulture farmers workshop** at Hanuman Junction on 16.11.2013
- ✓ **Sericulture farmers workshop** at Mysore on 28.1.2014
- ✓ Participated in National Seminar on Organic Agriculture-Challenges and Prospects, held at CSK Himachal Pradesh Agricultural University, Palampur, Himachal Pradesh during 28-29th May, 2014.

- ✓ Participated in International Congress on Sericulture and Silk Industry held at Bangalore during 24th -27th November, 2014.

13. SIGNIFICANT ACHIEVEMENTS:

- ✓ Developed and validated Poshan - a multinutrient formulation of balanced nutrients along with growth promoters for correcting nutrient deficiencies in mulberry.
- ✓ Three parameters viz., leaf temperature, phenol content and total carbohydrates have been identified as physiological and biochemical markers for screening of mulberry genotypes for root rot resistance.
- ✓ 5 tolerant (Hungarian, Himachal local, Ber. 20, Almora local & Local ♂) and 5 susceptible (Ber. C 776, S 30, Sujapur 5, V 1 & S 54) mulberry genotypes have been identified in the project, which will be utilized as parents for root rot resistance breeding.
- ✓ A health drink called “**Spoorthi**” was developed from mulberry leaves. Technology validation of the product was done through clinical trials and was found effective in controlling high blood pressure and sugar.
- ✓ A new herbal farmer friendly formulation “**Chetak**” has been developed for management of major foliar and soilborne diseases of mulberry and is under large scale testing.
- ✓ “**Compomix**” was developed for hastening the composting process and for production of disease suppressive quality compost.
- ✓ Developed methodology for extraction of mulberry leaf protein concentrates and exploited to use in preparation of functional foods for human health promotion and disease prevention.
- ✓ Isolated the pathogens associated with root rot disease in mulberry (*Fusarium solani*, *F. oxysporum*, *Macrophomina phaseolina* and *Botryodiplodia theobromae*).
- ✓ Established the mechanism of wilting due to root rot disease.
- ✓ Identified the associated predisposing factors for the outbreak of root rot disease in mulberry for effective management of the disease and

developed a bioconsortium by using region specific isolates of *Trichoderma* for efficient biomanagement of the disease.

- ✓ A disease calendar was prepared for better management of foliar and root diseases in mulberry.
- ✓ Developed a package on Disease Free Nursery (DFN) concept for prevention of soilborne diseases using exclusion of pathogens as disease control strategy in mulberry.
- ✓ Identified and reported 2 new fungal diseases - *Cladosporium chlorocephalum* causing stem blight and *Colletotrichum dematium* causing anthracnose diseases in mulberry.
- ✓ Identified and reported bacterial leaf scorch disease in mulberry caused by a fastidious, xylem- inhabiting bacterium.
- ✓ Identified and reported yellow streak viral disease in mulberry.
- ✓ Involved in identification of RFLP markers and found the association of 8 RFLP markers responsible for high cocoon shell ratio in silkworm, *Bombyx mori*.
- ✓ Established that there is no linkage between RFLP markers and conventional markers in silkworm, *Bombyx mori*.
- ✓ Explored on the possibilities of mulberry leaf and leaf protein concentrate as protein rich food source for inclusion in human diet.
- ✓ Studied the involvement of disease complex in mulberry manifested by root knot nematodes in association with soilborne pathogens and their management.
- ✓ Studied crop loss and management of root rot disease under field conditions of Tamil Nadu.
- ✓ Evaluated the efficacy of *P. fluorescens* for control of root rot disease in mulberry and recommended to integrate *P. fluorescens* with *Trichoderma harzianum* for effective management of the disease.
- ✓ Deproteinized mulberry leaf juice was prepared and used for culturing of microorganisms.
- ✓ Reported on the mid gut microflora of silkworm in both bivoltine and multivoltine races.
- ✓ Isolated 17 Gram +ve and 8 Gram –ve bacteria for production of protease enzyme through microbial fermentation using sericultural wastes.

- ✓ Developed a laboratory level technology for chemical extraction of Lysine from silkworm pupae waste.
- ✓ Achieved **97.68 % target** in disposal of layings at Grainage Extension Centre. Disposed 5,51,222 Dfls & Coordinated in disposal of 2,37,153 layings through sales counters.
- ✓ Involved in Summer Seed programme and produced 74,00,000 of P1 Pure Mysore seed cocoons & maintained cashbook and accounts at REC/GEC.
- ✓ Extension education and TOT/OFT programmes, Need based Training programmes, established REC at Eluru and conducted survey in the coastal Andhra Pradesh for expansion of Sericulture.
- ✓ At P3 Farm maintained mulberry garden and supplied 17,116 P2 Dfls and conducted P1 Bivoltine grainage and produced 39,000 Dfls.

14. Patents & Commercialization

- A health drink named “**Spoorthi** “ was developed from scientifically grown mulberry leaves, which controls high blood pressure and sugar. The health drink is under the process of patenting and it has been commercialized through **NRDC** for a lump sum royalty of **Rs. 15 lakhs**, which is highest among the technologies of the Institute so far, commercialized.

Patent application # 1898/CHE/2005 dated: 23.12.2005

- A new herbal farmer friendly formulation “ **Chetak**” has been developed for management of major foliar and soilborne diseases of mulberry and is under large scale testing.

Patent application # IPR/4.4.3/06069 Date: 17.10.07

- Poshan- A multinutrient formulation for correction of nutrient deficiencies in mulberry. The technology was commercialized to Rain bow Agro Vet Technologies, Kadapa (Rs. 1.25 Lakh royalty) and Seri Care Technologies, Bengaluru (Rs. 1.25 Lakh royalty).

Patent application # 1915/CHE/2012 Dt. 14.5.2012

15. Awards/Honours received:

- Honoured by Dr. P. Selvidas, Vice chancellor, University of Mysore, Mysore for obtaining **1st Rank in M.Sc.**, Microbiology during 8th anniversary of establishment of Gulbarga University on 10.09.1988.

- Received **Gold Medal in M.Sc.**, from His Excellency Sri. Pendekanti Venkatasubbaiah, Chancellor and Governor of Karnataka, during 7th convocation of Gulbarga University on 26.02.1989.
- Received **Cash Award** under **Hindi Noting-Drafting** Incentive Scheme for having worked in Hindi during the year 1994-95.
- Received **Cash Award** under **Hindi Noting-Drafting** Incentive Scheme for having worked in Hindi during the year 1995-96.
- Received **Cash Award** under **Hindi Noting-Drafting** Incentive Scheme for having worked in Hindi during the year 1996-97.
- Received **CSRTI Award** by Dr. H. Basker, CEO & Member Secretary, Central Silk Board, Bangalore for developing and testing of “**Spoorthi**” – a **mulberry leaf health drink** during Reshme Krishi Mela held at CSRTI, Mysore on 16.11.2004.
- Received Certificate of Appreciation as **Best Officer** on the Institute for the **year 2006** for sincere service rendered to the Institute from Dr. S. B. Dandin, Director, CSRTI, Mysore on 2.1.2007.
- **Technology Innovation Award** for developing Spoorthi – Mulberry leaf health drink by **NRDC, New Delhi** and **CSB, Bangalore** during National Seminar on Training and Technology Awareness for Women Sericulturists held on 16th and 17th March, 2007 at CSRTI, Mysore.
- Received Award certificate (II prize) for **best poster** presentation of research paper entitled “Mulberry a versatile plant for human nutrition and health” at **UGC sponsored National Seminar** on Functional Foods for Health Promotion and Disease Prevention held at University of Mysore, Mysore during 14th and 15th February 2008.
- Received Award certificate for developing **Chetak – An user and Eco-friendly herbal based formulation for the management of foliar and soilborne diseases of mulberry** during Reshme Krishi Mela held at Chitradurga on 3.1.2009.
- Received Award certificate for developing **Poshan – A multi nutrient formulation for mitigation of nutrient deficiencies in mlberry** during Reshme Krishi Mela held at Belagavi on 5.3.2011.
- Received letter of Appreciation for significant contribution towards the large scale field testing of L14 x CSR2 hybrid resulting in achieving a break through cross breed

- Received **Cash Award** under **Hindi Noting-Drafting** Incentive Scheme for having worked in Hindi during the year 2013-14.
- Received **Cash Award** under **Hindi Noting-Drafting** Incentive Scheme for having worked in Hindi during the year 2014-15.

16. Dissertation/ Project works guided:

- ❖ Phytosanitary Effect of Plant Growth Promoting Rhizobacteria and Chemical Elicitors against Multiple Foliar Diseases in Mulberry - M.Sc., (Seri Tech).
- ❖ Compatibility of antagonistic/ useful microbes with chemical fertilizers and growth promoters used in mulberry (*Morus* spp.) production - M.Sc., (Microbio.).
- ❖ Effect of combined application of nutrients and fungicides against fungal leaf blight of mulberry - M.Sc., (Seri Tech).
- ❖ Distribution of soil microflora in various habitats of mulberry (*Morus* spp.) - M.Sc., (Micro Bio).
- ❖ Comparative study of rhizosphere and rhizoplane microflora in healthy and diseased mulberry gardens - M.Sc., (Seri Tech).
- ❖ Studies on morpho-physiological and primary nutrient variations in some elite mulberry genotypes – M.Sc., (Biochem.)
- ❖ Studies on morpho-biochemical variations in some elite mulberry genotypes – M.Sc., (Biochem.)

17. Contribution Towards Implementation of Official Language

- ✓ Qualified **Prathamik** Examination conducted by **Dakshin BharatHindi Prachar Sabha, Madras** during 1978 and secured **IInd** class.
- ✓ Qualified **Madhyama** Examination conducted by **Dakshin BharatHindi Prachar Sabha, Madras** during 1979 and secured **IInd** class.
- ✓ Qualified **Prabodh** Examination conducted by **Hindi Teaching Scheme** (Exam Wing), Department of Official Language, Ministry of Home Affaires, New Delhi during 1995 and secured **66.33** % marks.
- ✓ Qualified **Praveen** Examination conducted by **Hindi Teaching Scheme** (Exam Wing), Department of Official Language, Ministry of Home Affaires, New Delhi during 1996 and secured **67.00** % marks.

- ✓ Qualified **Pragya** Examination conducted by **Hindi Teaching Scheme** (Exam Wing), Department of Official Language, Ministry of Home Affairs, New Delhi during 1995 and secured **63.66 %** marks.
- ✓ **Participated in All India Scientific /Technical seminar (Rajabhasha)** and presented a paper entitled **Jaiva prowdyogiki ke sahare krishi ki unnathi** held at Defence Food Research Laboratory (DRDO), Mysore during 6-7th April, 2000.
- ✓ Participated in various **Hindi Competitions** conducted on occasion of **Official Language Fortnight** and bagged prizes.
- ✓ Signing **Attendance register in Hindi**.

18. Details of Publications :

International Journals:		18
National Journals		
/Proceedings:		23
Chapters in Book	02	
Book		01
Popular articles:	44	
Papers presented in		
Seminars/Symposia:		35
News Papers clippings		56
Radio Talk		08
Silk Briefs		12
TOTAL		131

Details	Single Author	Senior Author	Second Author	Rest of Places	Total
Research Papers					
National Journals	-	13	4	7	24
International Journals	-	8	5	7	20
Chapters in books	-	1	1	-	2
Book	-	1	-	-	1
Popular Articles	9	24	3	8	44
Seminars/Symposia	1	11	3	20	35
Radio talks	-	-	-	-	8
News Paper Clippings	-	-	-	-	56
Silk Briefs Indian Silk	-	-	-	-	12
Grand Total	18	57	16	41	131

List of publications

International Journals

1. **N. B. Chowdary**, V. Nishitha Naik, D. D. Sharma and Govindaiah (2002) Deproteinized Mulberry Leaf Juice – A New Media for Growth of Microorganisms. *Int. J. Indust. Entomol.* Vol. 5(2). Pp. 217-220.
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4. Nuutana sankethika vidhanalato aadayam pempu lakshyam, *Eenadu*, *Prakasam Dt.*, edition, 2.1.2014, p. 3.
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57. Pattu padithe profitte, Andhra Jyothi, Prakasam Dt., edition, 4.7.2015, pp. 1&9.

Radio Talks

1. Talk in English on “**Diet and Nutrition in Cancer prevention**” Broadcasted from All India Radio, Gulbarga, Karnataka on 2/11/1990.
2. Talk in Telugu on “**Mulberry saagu Pattu purugula pempakamlo teesukovalsina jagrattalu**” Broadcasted from All India Radio, Markapur, AP on 31/7/2014.
3. Talk in Telugu on “**Mulberry saagu vidhanam samagra sasya rakshana**” Broadcasted from All India Radio, Markapur, AP on 1/1/2015.
4. Talk in Telugu on “**Bivoltine pattu purugula pempakamlo nutana sankethika paddatulu**” Broadcasted from All India Radio, Markapur, AP on 6/7/2015.
5. Interview in Telugu on “**Pattu parisrama-Pradhanyata**” Broadcasted from All India Radio, Kadapa, AP on 29/7/2015.
6. Talk in Telugu on “**Mulberry thotala sasyarakshana**” Broadcasted from All India Radio, Kadapa, AP on 5/8/2015.
7. Talk in Telugu on “**Mulberry thotala saagu**” Broadcasted from All India Radio, Kadapa, AP on 12/8/2015.

8. Talk in Telugu on “**Pattu purugula pempakamlo rythulu teesukovalsina jagratjalu**” Broadcasted from All India Radio, Kadapa, AP on 19/8/2015.

Silk Briefs in Indian Silk

1. Field Day at Podalakuntapalli– Indian Silk (2014), Vol. 4 (52 old), 10-11, p. 40
2. Awareness Programme at Cherlopalli– Indian Silk (2014), Vol. 5 (53 old), 2-4, p. 40
3. Group Discussion at Racherla Mandal– Indian Silk (2014), Vol. 5 (53 old), 2-4, p. 41
4. Group Discussion at Ramachandra Kota – Indian Silk (2014), Vol. 5 (53 old), 2-4, p. 41
5. Group Discussion at Paluguntipalli – Indian Silk (2014), Vol. 5 (53 old), 2-4, p. 41
6. Organic Farming Training at Giddalur- Indian Silk (2014), Vol.5 (53 old), 2-4, p. 44
7. Organic Farming Training at Thimmapuram- Indian Silk (2015), Vol.5 (53 old), 8-9, p. 69.
8. Awareness Programme at Cumbum– Indian Silk (2015), Vol. 5 (53 old), 10-11, p. 41
9. Field Day at Kaluvapalli– Indian Silk (2015), Vol. 5 (53 old), 10-11, p.42.
10. Group Discussion at Pandillapalli– Indian Silk (2015), Vol. 5 (53 old), 10-11, p.44.
11. Field Day at Kaluvapalli– Indian Silk (2015), Vol. 5 (53 old), 10-11, p.42.
12. Organic Farming Training at Giddalur– Indian Silk (2015), Vol. 5 (53 old), 10-11, p.46.

External funded Projects (as CI)

- ✓ **Restriction Fragment Length Polymorphism analysis for cocoon shell ratio and NPV resistance in silkworm *Bombyx mori* (DBT sponsored project).**

Membership in Academic bodies/Journals

- ✓ **Life member for Indian Journal of Sericulture.**
- ✓ **Member in National Academy of Sericultural Sciences, India.**

Reviewer for the following International Journals

- Crop Protection – Elsevier publication
 - International Journal of Agricultural Policy and Research
 - Biochemistry and Biotechnology Research
 - Issues in Biological Sciences and Pharmaceutical Research
 - African Journal of Agricultural Research
 - Merit Research Journal of Agricultural Science and Soil Sciences
 - International Research Journal of Public and Environmental Health
-
- Served as an Editorial board Member for the Point Journal of Botany and Microbiology during the year 2015-2017.
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- Participated in the programme Polam pilustondi organized by the AP State Agriculture Department during the year 2013-14; 2014-15; 2015-16 and guided the farmers on various aspects of mulberry cultivation and silkworm rearing.