Curriculum Vitae

Full Name (in Block letters):	Dr. S. GANDHI DOSS
Designation:	Director
Department/ Institute/ University:	Central Sericulture Research and Training Institute (CSB-CSRTI), Central Silk Board, Ministry of Textiles, Govt. of India, Srirampura, Manandavadi Road, Mysore. Karnataka.
Address for Communication:	Central Sericultural Research & Training Institute (CSB-CSRTI), Manadavadi Road, Srirampura, Mysuru - 570008. Karnataka. Phone Off: 08212362757 Mobile: 8618493018/8292987181 e-mail: sgdoss@gmail.com; sgandoss@yahoo.in; sgdoss.csb@nic.in;

Education:

Lucation.					
Name of the University	Degree	Year	Subjects taken with Specialization	Class/ Dvn.	
ANJA college, Sivakasi, Madurai Kamaraj Univ. (TN)	B. Sc.	1988	Botany (Ancillary subjects: Zoology, Chemistry)	1 st	
ANJA college, Sivakasi, Madurai Kamaraj (TN)	M. Sc.	1990	Botany	1 st (5 th Rank)	
Kalyani Univ., Kalyani (WB)	Ph. D.	2009	Botany		
Dhakshin Bharath Hindi PracharShabha, Madras	Rashtra Bhasha Praveen Poorvardh (RBPP)	Hindi	1994		

Awards:

Awarded by	Title	Year	Subjects
CSIR, Department of	Junior Research	1991	Biological
Education, Ministry of	fellowship (JRF).		Sciences
HRD, Govt. of India.			
Department of	National Eligibility	1999	Biological
Education, Ministry of	Test (NET)		Sciences
HRD, Govt. of India.	(For Lecturership)		
Department of	GATE (Graduate	1999	Biological
Education, Ministry of	Aptitude Test of		Sciences
HRD,	Engineering)		
Govt. of India.			
Academy of Plant	APSI Smt. Rama	2016	Plant
Sciences India,	Devi Award with		Breeding &
Muzaffarnagar. India.	Gold Medal.		Genetics
CSRTI, Mysuru.	Rajbhasha Shield	2020	Official
	2019-20		Language
			(Hindi)

Positions Held / Research Experience in various institutions:

SI	Institution	Position	From	To (date)
No.	Place		(Date)	, ,
1	Central Sericultural Research & Training Institute (CSB-CSRTI), Central Silk Board, Mysuru. Karnataka.	Director	20-03- 2023	Till date
2	Central Tasar Research & Training Institute (CSB-CTRTI), Central Silk Board, Ranchi. Jharkhand.	Scientist-D	12-04- 2021	19-03- 2023
3	Central Sericultural Research & Training Institute (CSB-CSRTI), Central Silk Board, Mysuru. Karnataka.	Scientist-D	01.01- 2015	11-04- 2021
3	Central Sericultural Research & Training Institute (CSB-CSRTI), Central Silk Board, Mysuru. Karnataka.	Scientist-C	16-06- 2010	31.12.2014
4	Central Sericultural Research & Training Institute (CSB-CSRTI), Central Silk Board,	Scientist-C	01-01- 2010	15-06- 2010

	Berhampore. West Bengal.			
5	Central Sericultural Research & Training Institute (CSB-CSRTI), Central Silk Board, Berhampore. West Bengal.	Senior Research Officer/ Scientist-B	24-02- 2004	31-12- 2009
6	Central Sericultural Research & Training Institute (CSB-CSRTI), Central Silk Board, Berhampore. West Bengal.	Senior Research Assistant	23-02- 1994	23-02- 2004
7	School of Energy, Environment & Natural Resources, Dept of Bio- Energy, M. K. University, Madurai. Tamil Nadu.	Junior Research Fellow	01-09- 1992	15-02- 1994

Training undergone:

SI. No.	Topic of the training	Period	Training venue	Organizing agency
1	Foundation course in Sericulture	01-10-94 to	CSB-CSR&TI, Berhampore West	Central Silk Board
		31-03-95	Bengal.	
2	Short Term Computer Training Course on Computer Applications.	14-07-03 to 20-07-03	Community Polytechnic, MIT (Murshidabad Instituite of Technology), Murshidabad. West Bengal.	-do-
3	Application of molecular tools in crop improvement.	16-11-09 to 21-11-09	IIT, Guwahati, Assam.	DBT
4	Direct Trainer Skills	17-07-17 to 21-07-17	Administrative Training Institute, Mysore.	DoPT

Teaching Experience:

SI No.	Institution Place	Position	Subject taught	From	То	Course/ Trainees	Regular/ Visiting
1	CSB-Central Sericultural Research & Training Institute, Central Silk Board, Berhampore. West Bengal.	Senior Research Assistant	Mulberry breeding and genetics, physiology and tissue culture	1996	2004	Post- Graduate Diploma in Sericulture (PGDS)	Regular
2	Swami Vivekananda Centenary college of Arts and Science, Khardha, West Bengal.	-do-	-do-	1998	2002	B. Sc. (Seric)	Visiting
2	Central Sericultural Research & Training Institute, Central Silk Board, Berhampore. WB.	Senior Research Officer/ Scientist- B	-do-	2002	2009	PGDS	Regular
3	Central Sericultural Research & Training Institute, Central Silk Board, Mysuru. Karnataka.	Scientist-C	Mulberry varieties and their character- -istics	2010	2014	Sericulturists/ DOS officials	-do-
5	Central Sericultural Research & Training Institute,	Scientist-D	-do-	2015	2021	Sericulturists/ DOS officials/ Univ. Faculty/	-do-

	Central Silk Board, Mysuru. Karnataka.					Overseas Delegates/ KVK Scientists	
6	Central Tasar Research & Training Institute, Central Silk Board, Ranchi. Jharkhand.	Scientist- D	Tasar host- plant culture/ Tasar silworm rearing	2021	2023	PGDS (Vanya)/ Sericulturists/ DOS officials/ Univ. Faculty/ KVK Scientists	-do-
7	Central Sericultural Research & Training Institute, Central Silk Board, Mysuru. Karnataka.	Director	Mulberry Sericulture, Extension and Training	2023	Till date	Sericulturists/ DOS officials/ Univ. Faculty/ Overseas Delegates/ KVK Scientists	-do-

Membership of scientific forums:

- India Society of Genetics and Plant Breeding (ISGPB), IARI, New Delhi Member
- ➤ Indian Society of Plant Breeders (ISPB), Coimbatore Life member
- National Academy of Sericultural Sciences-India (NASSI), Bengaluru Life Member
- > Academy of Plant Sciences-India (APSI), Muzaffarnagar Member
- International Society of Photosynthesis Research (ISPR), London, UK. Member
- ➤ The Indian Science Congress Association (ISCA), Kolkata. Life Member

Publications (Annexure): 82

Books: 1;

Chapters in books: 3; Research Papers: 32;

Reports: 3;

General articles: 5 Seminar/Conference: 40 Project(s) being pursued/ carried out:

SI.	ct(s) being pursued/ carr Title of the project	Fundin	Duration	Position in the	Cost
No.		g agency		Project	[in Lakhs]
1	PIE3167: Mulberry germplasm evaluation in relation to quality, quantity and stress resistance.	Central Silk Board	2000 to 2005	Co-Investigator	44.0
2	PIB3191: Selection of high yielding mulberry varieties for improvement of cocoon production in gangetic plains of West Bengal & similar regions.	-do-	2000 to 2007	Principal Investigator	8.01
3	PIB3290: Evaluation of New Mulberry Genotypes for their yield and quality.	-do-	2003 to 2007	Co-Investigator	15.31
4	PIE3310: Evaluation of improved mulberry genotypes for acidic soils of West Bengal.	-do-	2004 to 2008	Co-Investigator	10.50
5	PIE3319: Screening of germplasm and raising of progeny towards development of disease resistant mulberry against bacterial leaf spot.	-do-	2005 to 2010	Co-Investigator	5.47
6	PIT3359: Development of high frequency regeneration protocol from leaf disc explants in mulberry.	-do-	2006 – 2010	Principal Investigator	4.06
7	PIB-3457: Development of disease resistant and productive mulberry genotypes with special reference to root-rot and root-knot diseases suitable to seri-zones of south India.	-do-	2012 - 2017	Principal Investigator	4.39

8	Development of Distinctness, Uniformity and Stability (DUS) descriptors for Mulberry (<i>Morus</i> spp.) and their Validation	PPV&F RA, New Delhi	2013 - 2016	Co-Investigator	22.67
9	PIE – 3575: Evaluation of mulberry genetic resources for functional traits associated with resilience to climate change	Central Silk Board	2016 - 2019	Principal Investigator	7.95
10	PIP3592: Identification of indices for abiotic stress tolerance in mulberry with special reference to moisture and alkalinity stress	-do-	2016 - 2019	Co-Investigator	7.00
11	PIC3620: Engineering photosynthesis in mulberry for resilience to climate change: A C4 approach	-do-	Aug 2017 – July 2021	-do-	37.36
12	PIB3631: Primary yield evaluation for identification of superior mulberry hybrids with drought adaptive traits under sub-optimal irrigated conditions	-do-	Mar 2018 – Feb 2022	-do-	8.73
13	PIB3632: Evaluation of superior triploid genotypes for yield and adaptability under varied agro-climatic conditions	-do-	Mar 2018 – Feb 2024	Principal Investigator	8.2
14	Multi-component Network project:- Genetic enhancement of mulberry through genomic approaches: Sub-Project NW3b — Development of new generation transgenic	DBT, New Delhi	Sept. 2018 – Aug. 2021	Co-Investigator	38.25

	mulberry for drought stress tolerance and characterization of existing transgenic mulberry for confined field trials.				
15	All India Coordinated Experimental Trial in Mulberry (AICEM) – Phase-IV	Central Silk Board	Apr. 2018 – Mar. 2024	Co-Investigator	2.85

Mulberry Varieties Developed:

Name of the Variety	Year	Individual/ collaborative	Additional Details/ Information
CT-44	2008	Collaborative	Delayed senescent high yielding mulberry for alluvial plains of West Bengal.
Tr-23	2009	-do-	For hills & foot hills of Eastern Himalayas
C-2038 (RG-120)	2010	-do-	High yielding mulberry variety for alluvial plains of West Bengal.
G-4	2018	-do-	High yielding mulberry variety for south zone sericulture.
AGB-8	2019	-do-	High yielding mulberry variety for sub-optimal soil moisture & fertilizers input conditions in south zone sericulture.

Highlights of outcome / progress of the project(s) and their utilization

- The 162 mulberry germplasm accessions maintained at CSRTI, Berhapore were characterized for different foliage and flowering characters. Based on 11 economically important parameters, they were grouped into 22 clusters for utilizing them in breeding programmes [PIE3167] [Doss et al. 2006; Rahman et al. 2006].
- Selected triploid germplasm was evaluated under different plant densities (spacing) for their yield potentialities and the optimum was 2' x 2' spacing under Gangetic planis of West Bengal [Doss et al., 2000].
- Flowering time and sex expression of germplasm accessions were recorded and a distinct difference in flowering time between indigenous and exotic

- accessions were documented in the agroclimatic conditions of West Bengal [Doss *et al.*, 1998].
- A report on detailed mulberry breeding programme for Eastern and North-Eastern India has been made wherein details of promising parents, flowering time, sex expression, yield potential and leaf quality, cumulative foliar diseases index, cumulative index based on physiological parameters (pWUE, RWC & Transpiration), yield potential during winter were given to facilitate different breeding programmes targeted to yield improvement, quality improvement, foliar disease resistance, drought stress resistance and winter hardiness, respectively.
- Two delayed senescent high yielding mulberry genotypes viz., CT-44 & CT-11 were developed for improving quality leaf productivity in Gangetic plains of West Bengal which showed 17.17 & 7.5% yield improvement over the check S-1635. The genotypes had significantly lower leaf senescence % i.e., 7 & 11%, respectively than the check S-1635 (20%) [PIB3191] (Doss et al., 2011).
- A high yielding mulberry genotype RG-120 has been identified with 27.79% yield improvement (54.9 mt/ha/year) over S-1635 (45.0 mt/ha/year) for irrigated plains of West Bengal [PIB-3290].
- A triploid mulberry genotype Tr-23 has been identified for acidic soils (hill & foot-hills) of West Bengal with a yield improvement of 56 & 77%, respectively, over the check BC2-59, yielding 24.5 & 14.4 mt/ha, respectively [PIE-3310].
- A rapid and direct shoot regeneration protocol and plant development protocol has been standardized for the improved varieties S-1 & S-1635 of West Bengal from both axillary bud and leaf disc explants [PIT-3359].
- A total of 35 mulberry germplasm accessions subjected to artificial inoculation studies to screen resistant accessions to root knot disease complex & identified 6 resistant accessions (Punjab local, Himachal local, English black, Morus multicaulis, Mysore local & Almora local) to root rot & 8 moderately resistant accessions (Morus multicaulis, China white, S-36, S-30, Roso, Mysore local, Almora local & K-2) to root knot disease.
- By utilizing resistant/ moderately resistant accession to root knot disease complex, 14 different crosses were made with promising mulberry varieties to develop disease resistant productive mulberry genotypes.
- Identified 43 promising hybrids with higher leaf yield over population mean, isolated 22 hybrids with horizontal resistance to root rot and root knot diseases of which 7 hybrids (hybrid no. 1, 2, 10, 32, 33, 35 and 40) exhibited higher leaf yield also over the population mean.
- Out of 3 mulberry varieties evaluated in AICM Phase-III, across 7 test centres
 of south zone, G-4 mulberry variety has been emerged as the high yielder
 and hence recommended for commercial use in southern sericultural states.

Dr. S. Gandhi Doss, M. Sc., Ph. D., RBPP. Director, CSB-CSRTI, Mysuru – 570008. Karnataka.

Annexure

Students guided:

More than 10 students guided for M. Sc. Dissertation works.

Books:

Item	Year	Details	Publisher	Pages
Mulberry breeding programmes for Eastern and North-Eastern India.	1998	S. P. Chakraborti, S. G. Doss, K. Vijayan, B. N. Roy, S. K. Sen and Saratchandra, B.	A report submitted to CSB, Bangalore.	36
Mulberry sapling Producer	2012	,	The manuscript submitted to NIMI, Chennai through Training Division, CSRTI, Mysuru.	81

Research papers:

- 1. Vijayan K, S.P. Chakraborti, **S. G. Doss**, A. Tikader and B.N. Roy (1998). Evaluation of triploid mulberry varieties I: Morphological and anatomical studies. *Indian J. Seric.***37(1)**: 64-67
- 2. Vijayan, K., **S. G. Doss**, S. P. Chakraborti and B.N. Roy (1998) Induced hexaploidy for crop improvement in mulberry. . *Bull. Seric. Research*.**9**:13-19.
- 3. Chakraborti S.P, K. Vijayan, **S. G. Doss**, B..N. Roy and S.M.H. Qadri (1999) Varietal differences on Karyomorphology of some popular cultivars in mulberry (*Morus* Spp) *Sericologia*. **39(1)**:43-50.
- 4. Rahman, M. S., **Doss, S. G.**, Vijayan, K., Setua, M and B. N. Roy (1999) Performance of improved varieties of mulberry under rainfed cultivation in West Bengal. *Ind. J. Agri. Sci.***69(10)**:752-4.
- Vijayan, K., K.K. Das, S. G Doss, S.P. Chakraborti and B.N. Roy (1999) Genetic divergence in indigenous mulberry (*Morus spp*) genotypes. *Ind. J. Agri. Sci.*69(12):851-3.
- 6. **Doss, S.G.**, Vijayan, K., Rahman, M. S, S. P. Chakraborti and B. N. Roy (2000). Effect of plant density on growth, yield and leaf quality in triploid mulberry. *Sericologia.* **40(1)**:175-180.
- 7. Rahman, M. S., **Doss, S. G.**, Vijayan, K. and Roy, B. N. (1999) Performance of the mulberry variety S1635 under three systems of planting in West Bengal. *Indian J. Seric.* **38(2)**:165-167.
- 8. **Doss, S.G.**, K.Vijayan, S. P. Chakraborti and B.N. Roy (1998) Studies on flowering time and its relation with geographic origin in mulberry. *Ind. J. Forestry.* **24(2)**:203-205.
- 9. Rahman, M. S., Doss, S. G. and Sau, H. (1999) Leaf quality assessment of selected mulberry germplasm genotypes through moulting test. Journal of Agri. Res.

- Vijayan, K., S. G. Doss A. K. Misra, Chakraborti, S. P., C. Das, and B. N. Roy (2000) Physiological and anatomical characters of mulberry at ploidy levels. *Ind. J. Plant Physiol.* 5(4):324-327.
- 11. Rahman, M. S., **Doss, S. G.** and Sau, H., B. N. Roy and Saratchandra, B. (2002). Quality assessment of mulberry accessions (Morus spp.) through moulting test, leaf moisture content & specific leaf weight (SLW). *Plant Archives*. **2(2)**:181-188.
- 12. S. P. Chakraborti, R. Banerjee, **S. G. Doss**, B. K. Das, N. K. Das, P. K. Mukherjee and S. Raje Urs (2004). Stability of mulberry genotypes under environmental variability. *Indian Agric.*, 48(3&4):239-242.
- 13. **Doss, S. G.**, M. S. Rahman, S. Debnath, M. K. Ghosh, H. Sau, P. L. Ghosh and A. Sarkar (2006). Variability, heritability and genetic advance in nine germplasm lines of mulberry (*Morus* spp.). *Indian J. Genet.*, 66(2):169-170.
- 14. Rahman, M. S., **Doss, S. G.**, S. Debnath, S. Roy Chowdhuri, P. L. Ghosh and A. Sarkar (2006). Gentic variability and correlation studies of leaf characters in some mulberry germplasm accessions. *Indian J. Genet.*, 66(4):359-360.
- 15. **Doss, S.G.**, Sengupta, T., K. Vijayan, Das, C., S. P. Chakraborti, B.N. Roy and Raje Urs, S. (2007). Evaluation of mulberry genotypes through physiobiochemical parameters and leaf yield under irrigated conditions of West Bengal. *Bull. Ind. Acad. Seri.* **11(1)**:62-68.
- 16. Vijayan K., S. P. Chakraborti, **S. G. Doss**, P. D. Ghosh and S. Ercisli (2008) Combining ability for morphological and biochemical characters in mulberry (*Morus* spp.) under salinity stress. *International J. Indust. Entomol.* 16:67-74.
- 17. Roychowdhuri, S., H. Sau, **S. G. Doss**, M. K. Ghosh and A. K. Bajpai (2009). Studies on flowering and receptivity of stigma in mulberry (*Morus* spp.) germplasm. *J. Crop and Weed Sci.*, 5(1):58-60.
- 18. Vijayan K., S. P. Chakraborti, **S. G. Doss**, P. D. Ghosh and S. Ercisli (2008) Combining ability for morphological and biochemical characters in mulberry (*Morus* spp.) under salinity stress. *Intl. J. Indust. Entomol.* 16(2):67-74.
- 19. Vijayan K., **S. G. Doss**, S. P. Chakraborti, P. D. Ghosh and B. Saratchandra (2010) Character association in mulberry under different magnitude of salinity stress. *Emir. J. Food Agric.* 22(4):318-325.
- Chattopadhyay, S. Ali, K. A., Doss, S. G., Das, N. K., Aggarwal, R. K., Bandopadhyay, T. K., Sarkar, A. and Bajpai, A. K. (2010). Evaluation of mulberry germplasm for resistance to powdery mildew in the field and greenhouse. J. Gen. Plant Pathol. 76:87-93.
- 21. Chattopadhyay, S. Ali, K. A., **Doss, S. G.,** Das, N. K., Aggarwal, R. K., Bandopadhyay, T. K., Sarkar, A. and Bajpai, A. K. (2011). Association of leaf micromorphological characters with powdery mildew resistance in field grown mulberry (*Morus* spp.) germplasm. *AoB Plants*.doi:10.1093/aobpla/plr002.
- 22. **Doss, S. G.,** Chakraborti, S. P., S. Roychowdhuri, N. K. Das, K. Vijayan and P. D. Ghosh (2011). Development of mulberry varieties for sustainable

- growth and leaf yield in temperate and subtropical regions of India. *Euphytica*, 185(2):215-225, DOI: 10.1007/s10681-011-0523-x.
- 23. **Gandhi Doss, S.** Chakraborti, S. P., Roychowdhuri, S., Vijayan K. and Ghosh P. D. (2011). Character association in improved mulberry genotypes exhibiting delayed leaf senescence. **J. Ornam. Horti. Plants.** 1(2):85-95.
- 24. **Gandhi Doss, S.** Chakraborti, S. P., Chattopadhyay, S., Das, N. K., Vijayan K. and Ghosh P. D. (2011). Physiological and biochemical characteristics associated with leaf retention in mulberry (*Morus* spp.). **Open J. Genet.** 1(3):27-33.
- 25. **Gandhi Doss, S.,** S. P. Chakraborti, S. Roychowdhuri, N. K. Das, K. Vijayan, P. D. Ghosh, M. V. Rajan, S. M. H. Qadri (2012). Variability, heritability and genetic advance in mulberry (Morus spp.) for growth and yield attributes. **Agricultural Sciences 3(2):208-213.** doi:10.4236/as.2012.32024.
- Banerjee, R., Ghosh, S., Doss, S.G., Saha, A.K., Bajpai, A.K. and Khatri, R.K. (2011). Morphological, anatomical and molecular characterization of full-sibpseudo- F2 (F1) progenies in mulberry with resistance to bacterial leaf spot (*Xanthomonas campestris* pv. *mori*). Ind. J. Genet. 71(4): 356-362.
- 27. Chattopadhyay, S., **Doss, S.G.,** Halder, S., Ali, K.A. and Bajpai, A.K. (2011). Comparative micro propagation efficiency of diploid and triploid mulberry (*Morus* alba cv. S1) from axillary bud explants. **African J. Biotechnol.** 10(79): 18153-18159. 6.
- 28. Maji, M. D., Chakraborty, S.P., **Doss, S.G.** and Bajpai, A.K. (2011). Disease response study of some improved mulberry genotypes under Gangetic plains of West Bengal. **Bull. Ind. Acad. Seri.** 15(2): 23-31.
- 29. Banerjee, R; Das, N. K.; **Gandhi Doss, S**.; Saha, A. K.; Bajpai A. K. and Bindroo, B. B. (2012) Narrow sense heritability estimates of bacterial leaf spot resistance in pseudo F2 (F1) population of mulberry (*Morus* spp.). **European J. Plant Pathol.**, 133:537-544.
- 30. Vijayan K., Chakraborti, S.P., **Doss, S.G.** and Ghosh, P.D. (2009). Breeding for salinity resistance in mulberry (*Morus* spp.). **Euphytica.** 169(3):403-411.
- 31. Banerjee, R., Chattopadhyay, S. Das, N. K., **Doss, S. G.,** Saha, A. K. and Kumar, N. (2014). Combining ability analysis for bacterial leaf spot resistance, leaf yield and agronomic traits in mulberry clones. *Journal of Crop Improvement.* 28:305-323.
- 32. **Doss**, S. G., M. K. P. Urs, M. Rekha, T. Thippeswamy and B. B. Bindroo (2016) Influence of GDD on sprouting behaviour and flowering time in mulberry germplasm accessions of diverse origin after winter dormancy. **Adv. Plant Sci.**, 29(2):219-223.

Books/ Chapters in Books:

 M. K. Ghosh, M. S. Rahman, M. Setua, S. G. Doss, S. Roychowdhuri and Sarkar, A (2006). Evaluation of newly developed improved mulberry genotypes in the gangetic alluvial soils under irrigated conditions of West

- Bengal. In: Moriculture. (eds.) Jaiswal, K., Trivedi, S. P., Padey, B. N. and Khatri, R. K., APH Publishing Corp., New Delhi. Pp. 23-31.
- Chattopadhyay, S. Ali, A. K., Doss, S. G., Das, N. K., Sarkar, A. And Bajpai, A. K. (2007). Screening of mulberry (*Morus* spp.) germplasm resources for resistance to powdery mildew. In: Moriculture. (eds.) Jaiswal, K., Trivedi, S. P., Padey, B. N. and Khatri, R. K., APH Publishing Corp., New Delhi. Pp. 130-138.
- 3. Urs, M. K. P, **Gandhi Doss, S.** and Chowdary, N. B (2013). Mulberry Sapling Producer for Modular employable skills Book submitted to NIMI, Chennai for Publication.
- Sarkar, T., Mogili, T., Doss, S. G., Sivaprasad, V. (2018) Tissue culture in mulberry (Morus spp.) intending genetic improvement, micropropagation and secondary metabolite production: a review on current status and future prospects. In N. Kumar (Ed.), Biotechnological Approaches for Medicinal and Aromatic Plants (pp-467-487). Springer Nature Singapore Pvt Ltd, Singapore https://doi.org/10.1007/978-981-13-0535-1_21.

Reports:

- 1. S. P. Chakraborti, **S. G. Doss,** K. Vijayan, B. N. Roy, S. K. Sen and Saratchandra, B. (1998). Mulberry breeding programmes for Eastern and North-Eastern India. A report submitted to CSB, Bangalore.
- 2. **S. G Doss,** S. P. Chakraborti, S. Roychowdhuri, M. D. Maji, B. C. Roy (2008). Selection of high yielding mulberry varieties for improvement of cocoon production in Gangetic plains of West Bengal and similar regions. Part-10 Final Report submitted to CSB, Bangalore on 28-01-2008.
- 3. **S. G. Doss**, S. Chattopadhyay, Banerjee, R. (2010). Development of high frequency regeneration protocol from leaf disc explants in mulberry. Part-10 Final Report submitted to CSB, Bangalore.

Popular articles :

Problems and prospects of mulberry breeding programmes for Eastern and North-Eastern India.	1999	S. P. Chakraborti, K. Vijayan, S. G. Doss and B. N. Roy.	Indian Silk	5-9
S1635- a variety with high promise for Eastern and North-Eastern India. Indian	1999	Vijayan, K., S.P. Chakraborti, K. K. Chatterjee, S. G. Doss, B.N. Roy and B. Saratchandra.	Indian Silk	22- 24
Sahatut main sighra nishpatrankeniyantran se pallyo ki gunabattyaebongutpadan main briddhi	2003	Chakraborti, S. P., S. Gandhi Doss, D. Chakravarty, B. K. Das and	Resham Bharati 16(32)	26- 27

		RajeUrs, S. (2003).		
CT-44 (C2047): A high yielding mulberry genotype with delayed senescence.	2011	Doss, S. G., Chakraborti, S. P., Roy Chowdhuri, S., Maji, M. D., Roy, B. C., Saratchandra, B and Bajpai, A. K. (2011)	Indian Silk, 1(49)	7-9
C- 2036 (RG-76): A cold tolerant mulberry Genotype.	2010	Rahman, M. S., Doss, S. G., Ghosh, M. K. and Bajpai, A. K. (2010).	Indian Silk, 49(7)	8-9

Research papers presented in Seminar/Symposium/Workshop:

- Doss, S. G., Raghunath, M. K., Das, K. K., Sau, H., Roy, B. N. and B. Saratchandra (1998). Evaluation of Japanese genotypes under tropical humid conditions. Proceed. On "Current technology seminar on Collection, Conservation and Utilization of Silkworm and Mulberry Germplasm" held on 9 th January 1998 at SMGS, Hosur. Tamil Nadu.
- 2. **Doss, S.G.**, Vijayan, K., S. P. Chakraborti and B.N. Roy (1998). Utilization of genetic divergence as tool for breeding of region specific varieties in mulberry. *Current technology seminar on mulberry and silkworm breeding and genetics, agronomy, molecular biology*" held at CSR&TI, Mysore, on 9-10 Sept. 1998.
- Rahman, M. S., S. G. Doss, H. Sau, B. N. Roy and B. Saratchandra (1999). Leaf quality assessent in some mulberry genetic resources. Proceed. Of National Seminar on "Breeder Scientists Interaction - Issues related to Germplasm maintanance, protection and utilization" held at Silkworm & Mulberry Germplasm Station, Hosur, on 10th Feb. 1999, p 6-7.
- Vijayan, K., Chakraborti, S. P., Doss, S. G., Ghosh, P. L. and Sartchandra, B. (2000). Achievement is polyploid breeding with special reference to the evolution of triploids for improvement of crops in different states. Proceed. Of Current Technology Seminar on Sericulture, CSR&TI, Berhampore, West Bengal. 21 - 22 July, 2000, p.1.
- Chakraborti, S. P., Vijayan, K., Doss, S. G., Ghosh, P. L. and Sartchandra, B. (2000). Screening of salinity tolerant varieties of mulberry: Salient features and package of practices. Current Technology Seminar on Sericulture, CSR&TI, Berhampore, West Bengal. 21st - 22nd July, 2000, p.1.
- 6. Chakraborti, S. P., **Doss, S. G.**, B. K. Das, P. K. Mukherjee and Raje Urs. S. (2003). Importance of pre-breeding stategies for development of region

- specific mulberry varieties suitable for Eastern and North-Eastern India. Worhshop on Pre-breeding stategies in mulberry.
- 7. S. P. Chakraborti, R. Banerjee, **S. G. Doss**, B. K. Das, N. K. Das, P. K. Mukherjee and S. Raje Urs (2003). Stability of mulberry genotypes under environmental variability. Proceed. Of National Symposium on "*Crop production under changing environment*" held at Bidan Chandra Krishi Viswavidhyalaya, Mohanpur, Nadia, West Bengal on 27-29th November, 2003. Abs. No. SI-P8, pp. 20-21.
- 8. M. K. Ghosh, M. S. Rahman, M. Setua, **S. G. Doss**, S. Roychowdhuri and Sarkar, A (2006). Evaluation of newly developed improved mulberry genotypes in the gangetic alluvial soils under irrigated conditions of West Bengal. In: Proceedings of Regional Seminar on "*Prospects and problems of sericulture as an Economic Enterprise in North West India*" held at Regional Sericultural Research Station, Sahaspur, Dehradun, Uttarakhand. On 11 12th November, 2006, pp. 34-37.
- 9. **Doss. S. G.,** Halder, S., Chattopadhyay, S. and Bajpai, A. K. (2007). Protocol standardization for in vitro propagation of mulberry (*Morus alba* L.) var. S-1 and its autotriploid from axillary bud explants. Proceed. Natl. Symp. On "*Recent Trends in Plant Sciences and Herbal Medicine*" held at ND University of Agriculture and Technology, Kumarganj, Faizabad, UP, India on 17th 18th December. Abs. No. 85. Pp. 45.
- 10. Chattopadhyay, S. Ali, A. K., Doss, S. G., Das, N. K., Sarkar, A. And Bajpai, A. K. (2007). Screening of mulberry (*Morus* spp.) germplasm resources for resistance to powdery mildew. Proceed. 18th All India Cong. Of Zool. And Natl. Seminar on "*Current issues on applied zoology and environmental sciences with special reference to eco-restoration & management of bioresources*" held at Univ. of Lucknow, Lucknow on 7th 9th December, 2007. pp. 167-168.
- 11. **Doss, S. G.**, Chattopadhyay, S., Banerjee, R., K. Mandal and Bajpai, A. K. (2008). Optimization of direct shoot initials development from leaf disc explants in mulbery (*Morus alba* L.) var. S1. Proceed. Natl. Conference on "*Perspectives and Present Scenario in Plant Science Research*" held at Institute of Sci., Mumbai on 20 21 Nov., 2008. Abs. No. 38. Pp. 24-25.
- 12. Banerjee, R., Roychowdhuri, S., Sau, H., **S. G. Doss**, Sartchandra, B., K. Mondal and Bajpai, A. K. (2009). Studies on biodiversity in mulberry (*Morus* sp.) germplasm resources. Proceed. Natl. Workshop on "*Seri-Biodiversity Conservation*" held at CSGRC, Hosur, TN. on 7 8 Mar., 2009. Abs. No. HP/O-21. p. 34.
- 13. Doss, S. G., Chakraborti, S. P., Roychowdhuri, S., Banerjee, R., K. Mandal, Saratchandra, B. and Bajpai, A. K. (2009). Developemnt of high yielding delayed senescent mulberry genotypes to increase quality leaf productivity under Gangetic plains of West Bengal and similar regions. Proceed. Natl. Seminar on "Emerging trends in plant sciences and herbal medicines" held at Narendra Deva University of Agric. And Technol., Kumarganj, Faizabad, U. P. on 17 18 Mar., 2009. Abs. No. 89. p. 72.

- 14. Banerjee, R., **Gandhi Doss, S.,** Mondal, K. and Bajpai, A.K. (2009). Genetic variability of bacterial leaf spot resistance and its relationship with agronomic traits in full-sib progenies of mulberry (*Morus* spp.). Abs. 119 (S-02) p. 86. 5th International Conference of Plant Pathology in the Globalized Era held on November, 10-14th 2009 at Indian Agricultural Research Institute, New Delhi.
- 15. Doss, S. G., Chakraborti, S. P., Roychowdhuri, S., N. K. Das, P. D. Ghosh and Bajpai, A. K. (2009). Association of agronomic traits with leaf yield of improved mulberry strains exhibiting delay or variation in leaf senescence. Proceed. Natl. Seminar on "Designing crops for the changing climate" held at Birsa Agricultural University, Ranchi, Jharkhand on 30 31 Oct., 2010. Abs. No. PS-I:48. Pp. 66-67.
- 16. Banerjee, R., Ghosh, S., Doss, S. G., K. Mandal, A. K. Saha and Bajpai, A. K. (2010). Genetic analysis for bacterial leaf spot resistance and polymorphism of genomic DNA of parents and progenies in full-sib pseudo F2 population in mulberry. Proceed. Of Workshop on "Recent Advances in Sericulture Research" held on 18 19 May, 2010. Abs. No. 3.5. p. 40.
- 17. Doss, S. G., Chattopadhyay, S., Banerjee, R., K. Mandal and Bajpai, A. K. (2010). Optimization of direct shoot initials development from leaf disc explants in mulbery (*Morus alba* L.) var. S1. Proceed. Natl. Seminar on Plant Biotechnology towards nutrition and neutraceutical Potential held at S N Vanitha Mahavidyalaya, Exhibition Grounds, Nampally, Hybderabad on 30 Sept. 1 Oct., 2010.
- Chakraborti, S. P., Sengupta, T., Chakravarty, D., Doss, S. G., Maji, C. And A. K. Bajpai (2011). Evaluation of some new genotypes for leaf quality in mulberry (*Morus* spp.). Proceed. Golden Jubilee Natl. Conference on "Sericulture Innovations: Before and Beyond" held at CSRTI, Mysore on 28 29 Jan. 2011. Abstract No. MIM/P-008. p. 5.
- 19. **Doss, S. G.**, Chakraborti, S. P., Vijayan, K., Ghosh, P. D. and A. K. Bajpai (2011). Association of important physiological and biochemical characters with leaf yield in delayed senescent mulberry (*Morus* spp.) genotypes under varied agro-climatic conditions of West Bengal. Proceed. Golden Jubilee Natl. Conference on "*Sericulture Innovations: Before and Beyond*" held at CSRTI, Mysore on 28 29 Jan. 2011. Abstract No. MPP/P-008. p. 18.
- 20. Doss, S. G., Chakraborti, S. P., Roychowdhuri, S., Vijayan, K., Ghosh, P. D., A. Sarkar and B. Sartchandra (2011). Breeding for delayed senescent and high yielding mulberry genotypes to increase quality leaf productivity in the sub-tropical agro-climatic conditions of West Bengal and similar regions in india. Proceed. Of Natl. Seminar on "Contemporary Approaches to crop Improvement" held at Univ. Agric. Sci., GKVK, Bangalore on 22 23 Apr., 2011. Abs. No. SA:70. pp. 200-201.
- 21. Banerjee, R., Roy Chowdhuri, S., Sau, H., **Doss, S. G.,** Saratchandra, B., Mondal, K. and Bajpai, A.K.(2009). Studies on biodiversity in mulberry (*Morus* spp) germplasm resources. Abs. HP/O-21: p. 34. National Workshop on Seri-Biodiversity conservation held at CSGRC, Hosur, Tamilnadu on 7 th 8 th March, 2009.

- 22. Chattopadhyay, S., Ali, K. A., **Doss, S. G.,** Banerjee, R.., Saha, A. K., Sarkar, A. and Bindroo, B. B. (2013). Association of anti-oxidant defense system with powdery mildew resistance in field grown mulberry (*Morus* spp.) germplasm. Proceedings of International Seminar on Bioresources and Human Sustenance, Cotton College, Guwahati, Assam. pp. 143-152.
- 23. Chattopadhyay, S., Ali, K. A., **Doss, S. G.,** Sarkar, A. and Bajpai, A.K. (2009). Differences in antioxidant defence system in powdery mildew resistant and susceptible mulberry (*Morus* spp.) resources. Abs. PP-055: pp. 270-271. National Conference on Vanya Silk held on 28 th 30 th January, 2009 at Ladoigarh, Jorhat, Assam under the aegis of National Academy of Sericultural science, Bangalore, India.
- 24. Chattopadhyay, S., Ali, K.A., **Doss, S.G.**, Banerjee, R., Saha, A.K. Sarkar, A and Bindroo, B.B. (2011). Association of anti-oxidant defense system with powdery mildew resistance in field grown mulberry (*Morus* spp.) germplasm. International Seminar on Bioresources and Human sustenance held on 20-22 Oct., 2011 at Cotton College, Guwahati, Assam.
- 25. Doss, S. G.; Chakraborti, S. P.; Chattopadhyay S.; Vijayan, K.; Ghosh. P. D. and Qadri, S. M. H. (2012) Role of antioxidant enzymes on delaying foliage senescence in mulberry for sustainable leaf production in Eastern and North-Eastern India.. pp. 11-12. Proceedings of Natl. Seminar on "Plant genetic Research for Eastern and North-Eastern India" held at ICAR Research Complex for NEH Region, Umiam, Meghalaya on 11 12 May, 2012.
- 26. Doss, S. G.; Urs, M. K. P.; Rajashekar, K.; Thippeswamy, T. and Bindroo, B. B. (2013) Influence of climatic change on biodiversity of mulberry and conservation strategies for posterity. p:34-35. National Conference on "Status and Conservation of Biodiversity in India with special reference to Himalaya" held at Center of Research for Development and Department of Environmental Science, University of Kashmir, Srinagar from 4-5 October, 2013.
- 27. Doss, S. G.; Urs. M. K. P.; Rekha, M.; Thippeswamy, T. and Bindroo, B. B. (2013) Influence of GDD on sprouting behaviour and flowering time in some mulberry germplasm accessions after winter dormancy. p:10. National Conference on recent Advances in modern Biology & Sericulture for women empowerment and rural development (RAMBSWERD-2013) 24-26th October 2013, KSSRDI, Thalaghattapura, Bangalore.
- 28. Roy Chowdhuri, S., Sau, H., **Doss, S. G.,** Ghosh, M. K. and Bajpai, A. K. (2009). Studies on flowering and receptivity of stigma in mulberry (*Morus* sp.) germplasm. National Symposium on: Agriculture in the Paradigm of Intergenerational Equity, Bidhan Chandra Krishi Viswavidyalaya, Kalyani, 22-23rd May, 2009.
- 29. Urs, M. K. P.; Rajashekar, K.; Rekha, M.; Mogili, T.; Kesavacharyulu, K.; Balakrishna, R.; **Doss, S. G.**; Rajan, M. V. and Qadri, S. M. H. (2012) Development of triploid mulberry genotypes for sustainable leaf yield and adaptability to varied agroclimatic conditions. p. 74. Proceedings of Natl. Seminar on "Plant genetic Research for Eastern and North-Eastern India"

- held at ICAR Research Complex for NEH Region, Umiam, Meghalaya on 11 12 May, 2012
- 30. Urs, M. K. P.; Rajashekar, K.; Gandhi Doss, S.; Thippeswamy, T. and Bindroo, B. B. (2013) Status, conservation strategies and utilization of biodiversity for development region specific mulberry varieties. p:39. National Conference on "Status and Conservation of Biodiversity in India with special reference to Himalaya" held at Center of Research for Development and Department of Environmental Science, University of Kashmir, Srinagar from 4-5 October, 2013.
- 31. **Doss, S. G.**; Rajashekar, K.; Sarkar, T.; and Sivaprasad, V. (2016) Importance of triploid mulberry for increasing leaf productivity for wider adaptability A mini review. p:94. Proceedings of International Conference on "Plant Research and resource management & 25th APSI Silver Jubilee Scientist's Meet 2016" held at Baramati, Maharashtra from 11 13 Feb. 2016.
- 32. Doss, S. G.; Rajashekar, K.; Nishitha Naik, V. and Sivaprasad, V. (2016) Development of disease resistant progeny with special reference to root knot disease complex through germplasm screening, hybridization & selection in mulberry (*Morus* spp.). p:197. Proceedings of International Conference on "Plant Research and resource management & 25th APSI Silver Jubilee Scientist's Meet 2016" held at Baramati, Maharashtra from 11 13 Feb. 2016.
- 33. **Doss, S. G.,** Rajashekar, K., Mogili, T., Sarkar, T., Gayathri, T. and Sivaprasad, V. (2016) Seedling aboveground biomass as selection criteria to short-list superior hybrids for leaf productivity in mulberry. National Conference on "Emerging Trends in Biotechnology for Agriculture, Medicine and Environment" held on 18-19 Nov. 2016 at Mahila PG College, Jodhpur, Rajasthan. P. 14.
- 34. Gayathri, T., **Doss, S. G.** and Rajashekar, K (2016). Studies on physiobiochemical traits contributing to leaf yield and quality in three improved mulberry varieties. International Seminar on new frontiers in cytogenetics and XIII conference of the society of cytologists and geneticists, 15-17th December 2016 at University of Kerala, Thiruvananthapuram.
- 35. Mogili, T., R. Balakrishna, Mala V. Rajan, A. Sarkar, M.T. Himanthraj, **S. Gandhi Doss**, Rajashekar, K, M.K.P. Urs, M. Rekha and V. Sivaprasad (2017) Development of G4 mulberry variety-Suitable for adult silkworm rearing under irrigated conditions of South India. National conference on Harmony with nature in context of environmental issues and challlenges (HARMONY-2017) at Kakatiya University, Warangal, Telangana on 21-23rd December 2017, Abstracts pages 12-13
- 36. **Doss, S. G.,** Rajashekar, K., T. Mogili, Kumar, P. M. P., Sarkar, T., Gayathri. T. and V. Sivaprasad (2018). Selection of mulberry hybrids resistant to root rot and root knot diseases with higher leaf productivity. In proceedings of "National Conference on Seri-Biomics: Challenges, Innovations and solutions" held at Department of Studies in Sericulture

- Science, University of Mysore, Mysuru-570006 during 15th-17th February, 2018, p. 45.
- 37. Gayathri, T., T. Mogili, **S. Gandhi Doss**, T. Sarkar and V. Sivaprasad (2018). Evaluation of improved mulberry varieties for antioxidant potential under optimal input conditions. *In:* 30th Kerala Science Congress, 28-30th January 2018 at Government Brennen College, Thalassery, Kannur, Kerala. *Abstracts*, *P:* 283-284.
- 38. Sarkar, T., A. S. Raghavendra, T. Mogili, **S. G. Doss,** Gayathri. T, Arunakumar G. S., Kavya Shree B, V. Sivaprasad (2018). Functional characterization of C4 photosynthesis-related genes in tobacco (Nicotiana spp.) and mulberry (Morus spp.): a gain of function approach. In proceedings of "National Conference on Seri-Biomics: Challenges, Innovations and solutions" held at Department of Studies in Sericulture Science, University of Mysore, Mysuru-570006 during 15th-17th February, 2018, p. 129.
- 39. Doss, S. G., Rajashekar, K., Prathees Kumar, P. M., Sarkar, T., Gayathri, T. and Sivaprasad, V. (2019) Development of root rot and root knot resistant productive mulberry genotypes. Proceedings of the 6th Asia-Pacific Congress of sericulture and Insect Biotechnology (APSERI-2019) held on 2 4th March 2019 at Mysore, India. p. 37.
- 40. Sarkar, T., Ravindra, K. N., Bharath Gowda, **Doss, S. G.,** Raghavendra, A. S., Nataraja N Karaba and Sivaprasad, V. (2019) Regeneration of G4 mulberry (Morus indica) plants from cotyledon and hypocotyl. Proceedings of the 6th Asia-Pacific Congress of sericulture and Insect Biotechnology (APSERI-2019) held on 2 4th March 2019 at Mysore, India. p. 36.

Dr. S. Gandhi Doss, M. Sc., Ph. D., RBPP Director, CSRTI, Mysuru