

CURRICULAM VITAE

Dr. KARTIK NEOG

Director

Central Muga Eri Research and Training Institute

(ISO 9001: 2015 Certified Institute)

Central Silk Board, Ministry of Textiles, Govt. of India

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Education:

- Ph. D. In Biotechnology from Gauhati University, Guwahati, Assam in 2012.
- M. Sc. (Agri) with specialization in Biotechnology, 1993, Assam agricultural University, Jorhat, Assam.
- B.Sc. (Agri) with elective in Agricultural Chemistry & Biochemistry, 1991, Assam Agricultural University, Jorhat, Assam

Details of Education:

Ph. D. : From Gauhati University, Guwahati, Assam.

Title of the Thesis:

“Study on biochemical stimulants in host plants for developing an effective indoor rearing technique of muga silkworm, *Antheraea assamensis*, Helfer (Lepidoptera : Saturniidae)”,

M. Sc. (Agri.) (1991-1993)

First class in Agricultural Biotechnology, Assam agricultural University, Jorhat, Assam

M. Sc. Thesis Title: “Effect of certain chemicals on regulation of senescence in Soybean”.

B. Sc (Agri.) 1988-1991)

First class (with distinction) from Assam agricultural University, Jorhat, Assam with Biochemistry & Agricultural Chemistry as elective subject.

Fellowship and awards:

Qualified National Eligibility Test for Jr. Research Fellowship and eligibility for lectureship, conducted by Scientific & Industrial Research, New Delhi in 1995.

Qualified National Eligibility Test for Lectureship/ Assistant Professorship, conducted by Agricultural Scientist Recruitment Board, ICAR, New Delhi in 1999.

Adjudged as a “Promising Scientist” for the year 2006-07 by CMER&TI, Lahdoigarh, Jorhat.

Adjudged as a “Promising Budding Scientist” for the year 2007-08 by CMER&TI, Lahdoigarh, Jorhat.

Received jointly with NEIST, CSIR, Jorhat the “Best Technology” award by CSIR, New Delhi, towards development of a bioformulation for enhancing silk production.

Adjudged as the “Best Scientist-Vanya” for the year 2015-16 under R&D Sector by Central Silk Board, Ministry of Textiles, Govt. of India.

Experience:

Almost 22 years of extensive experience in research and extension relating to Muga, eri and mulberry culture, tissue culture and over all development of sericulture in the North Eastern Part of India.

Sl. No.	Organization/ Institute	Capacity/ Designation	Duration/ Period	Subject area	Important contribution
01.	Dept. of Soil Conservation, Govt. of Assam	Trainee Apprentice	12 months	Watershed Development	Prepared project for Bogibill Watershed Project of Dibrugarh, Assam
02.	Assam Agricultural University, Jorhat	Junior Research Fellow	01.12.1993 to 31.07.1995	Plant Biotechnology	Standardized protocol for tissue culture propagation and biochemically characterized Som and Soalu plants for Muga silk culture,
03.	Muga Seed Development Project, P-3 Unit, Jia	Senior Research Assistant	01.8.1995 to 30.7.2000	Muga Seed Development	Produced and supplied P-3 dfis (Aherua and Late Bhodia seed crops) to State Sericulture Departments as per demand and was always successful in fulfilling the Annual Target

04.	MSDP, P-3 Unit, Lahdoigarh, Assam	-do-	18 th Nov., 1996 to 30 th Nov., 1996	Muga seed production	Short term deployment for P- 3 basic seed production, produced 20000 Basic Muga Silkworm Seed (Dfls)
05.	Silkworm Seed Production Centre, North Lakhimpur	-do-	17 th April, 1997 to 16 th May 1997	-do-	Short term deployment for P- 2 basic seed production and produced 15000 Basic Muga Silkworm Seed (Dfls)
06.	Regional Sericultural Research Station, Jorhat	Senior Research Assistant	01.8.2000 to 19.9.2004	Research on Mulberry Sericulture	
07.	CMER&TI, Lahdoigarh	Senior Research Assistant	20.9.2004 to 01.08.200 5	Research on Muga Silkworm and Host Plant Improvement and Protection	1. Established Bio-chemistry laboratory in the Institute and carried out all the biochemical estimations of soil and leaf samples under different on-going projects. 2. Established tissue culture laboratory of the Institute.
07.	CMER&TI, Lahdoigarh	Senior Research Officer / Scientist - B	01.8.2005 2010	Research on Muga Silkworm and Host Plant Improvement and Protection	
08.	CMER&TI, Lahdoigarh	Scientist - C	2010-2014	-do-	
09.	CMER&TI, Lahdoigarh	Scientist - D	2014-2019	-do-	
10.	REC, Dimapur	Scientist - D	2019-2022	Mulberry extension	
11.	RSRS, Jorhat	Scientist – D	2022-2023	-do-	
12.	MESSO, Guwahati	Director	2023-24	Muga Eri Silkworm Seed Production	
13.	CMER&TI, Lahdoigarh	Director	20224-till date	Muga, Eri and Oak Tasar R&D	

Brief resume of scientific contributions

1. A new Mulberry variety named as 'JRH' was developed and evaluated under Assam condition. The variety has the leaf yield potential of 2.95kg per plant; 28.0MT per hectare under rain fed condition.
2. Evaluated several mulberry germplasm materials under Assam condition under a Network programme of All India Coordinated Mulberry and silkworm germplasm evaluation programme.
3. 15 Nitrogen-fixing and 6 Phosphate solubilizing bacteria from soils of NE India were isolated, characterized biochemically & at molecular levels and identified.
4. Established Bio-chemistry laboratory in the Station and carried out all the biochemical estimations of soil and leaf samples under different on-going projects of the Regional Sericultural Research Station, Jorhat, Assam.
5. Imparted training to farmers of Assam on improved technologies of mulberry sericulture.
6. Wild Muga growing areas of North East India and Sikkim were surveyed and several populations of cultivated and wild muga silkworm were collected. Molecular marker analyses indicated presence of mobile elements which may add to "dynamism" of the *A. assamensis* genome, enabling individuals **to adapt to microclimatic fluctuations in different topographical regions**. Two collected accessions (**Aa-002 and Aa-005**) exhibited disease tolerance with **higher ERR, i.e. survivability (68%)** compared to 10-20% in other accessions during peak period of disease incidence. These two accessions were put under multi-location trials at different places e.g., Tura, Meghalaya; Mangaldoi and Lakhimpur, Assam; and Coochbehar, West Bengal for their rearing performance under varied climate. **60-70% ERR** of the accessions were reported.
7. Three bacteria and 6 fungi were isolated and identified as causal organisms of diseases of muga silkworms. The entomogenous fungi were identified as, *Beauveria bassiana*, *Aspergillus* spp. *Fusarium moniliforme*, *Penicillium chrysogenum*, *Penicillium digitatum* and *Nigrospora oryzae*. Natural occurrence of these entomogenous fungi reveals as high as 38.98 percent against *B. bassiana* and a low of 1.56 per cent against *P. digitatum*. The three bacteria identified were : Creamy bacteria (*Bacillus thuringiensis*) Yellow bacteria (*Aeromonas salmonicida*) Orange bacteria (*Straptomyces bombycis*).
8. Developed a buffer (**Muga Silk Plus**) for cooking of muga cocoons, **which enhanced silk recovery up to 53-54%** from 45% in traditional method of cooking.
9. **Three bacteria responsible for softening of Muga cocoons were identified**; out of which two were identified as *Bacillus cereus* and other as a different strain of *Bacillus*. Degumming tests of muga cocoons with these strains indicated slight improvement in silk recovery percent over a period of 72-hours under normal temperature and cooking conditions. Efforts are on to increase the degumming ability of the strains and to decrease the time for degumming by adjusting temperature and cocoon cooking conditions like pH etc.

10. Two muga silkworm host plants 'Som' and 'Soalu' were biochemically characterized and chemical stimulants were identified through different techniques which have role in growth and development of the silkworm. The significant achievements and observations made under the project were: (1). Two primary host plants of muga silkworm, Som (*Persea bombycina*) and Soalu (*Litsea polyantha*) were biochemically characterized. (2). Attracting and biting factors present in the host plant leaves were identified. Their role on the feeding habit of the silkworm was established. (3). The chemical substances identified were categorized as:
 - a. Attracting factors: citral, linalool and linalyl acetate.
 - b. Biting factors: Beta sitosterol along with myricetin.
 - c. Chemicals acting as both attracting and biting factors: Caryophyllene, Decyl aldehyde, and Dodecyl aldehyde.
11. Standardized the culture media for micro-propagation of muga host plant Som (*Persea bombycina*) with **35-50% sprouting** i.e., MS Media supplemented with BAP, NAA, Kinetin, Zn, Cu etc. Media for shoot proliferation has been standardized with 3-12 shoots after 15-20 days of culture. MS media fortified with IAA, IBA and NAA showed **40% rooting after 14-20 days** of culture.
12. A plant extract formulation (**Muga Heal**) effective against Flacherie disease of muga silkworm was developed in association with the Biotechnology Division of North East Institute of Science & Technology (Formerly Regional Research Laboratory), (NEIST), Jorhat. Application of the formulation can reduce the mortality of muga silkworm due to flacherie disease, increase **cocoon recovery 20-30% more** and up to **5% increase in silk content of cocoon shell** over untreated plots. The use of the formulation was popularized in large scale among the farmers of Jorhat, Golaghat, Dibrugarh and Sivasagar districts of Assam through implementation of ToT programme during 2014-15. The effort is also being made to popularize the same in other muga growing areas of the state.
13. Standardization of use of juvenile hormone analogue "Methoprene" on muga silkworm and its application at farmers' field with significant impact on fecundity and overall productivity. There was an overall 38 % (37.96% actual) enhancement of fecundity in treated over the control moths. Besides this, some beneficial effect of the hormone was observed, viz. very low or nil emergence of crippled moths during Aherua crop grainage. Higher hatching of eggs (more than 75 %, maximum 90 % hatching) in treated ones compared to very low (below 45 %) to medium (50 %) hatching in the non treated eggs.
14. Integrated nutrition management package (Biofertilizer consortium) for castor plant has been developed. The average leaf yield per castor plant is 78 nos. while treated with the INM package. Application of this INM package can enhance the leaf yield by 35-40% against the untreated plants. The average leaf biomass increased over control recorded from 65-70% while treated with the recommended INM package.
15. Standardized the culture media for micro-propagation of muga host plant Som (*Persea bombycina*) with **35-50% sprouting** i.e., MS Media supplemented with BAP, NAA, Kinetin, Zn, Cu etc. Media for shoot proliferation has been standardized with 3-12 shoots after 15-20 days of culture. MS media fortified with IAA, IBA and NAA showed **40% rooting after 14-20 days** of culture.

16. A protocol of indoor rearing has been developed, following which up to 3rd instar, 80-90 % survivability of muga silkworms and up to 4th instar, 75-85 % survivability of worms can be obtained
17. Partial successful in domestication of muga silkworm by rearing up to last instar successfully for several generations.
18. Antimicrobial peptides were isolated from the haemolymph of muga silkworm (*Antheraea assamensis*) larvae. The peptides have been evaluated for antimicrobial activity against fungal and bacterial pathogens, biochemically characterized and sequenced.
19. De novo transcriptome analysis of the muga silkworm, *Antheraea assamensis* (Helfer) and mitochondrial genome has been sequenced completely.

Technologies / process developed/ patented

The following technologies have been applied for patenting

- A. *Terminalia chebula* based bioformulation for healthy larvae and production of quality silk fibre by muga silkworm, *Antheraea assama*, Westwood (Lepidoptera: Saturniidae) (Applied through CSIR-NEIST, Jorhat, Assam) **Patent No. 182 NF 2009.**
- B. A Semi-synthetic diet for muga silkworm, *Antheraea assamensis*, Westwood (Lepidoptera: Saturniidae) for its early stage rearing (Applied through CSIR-NEIST, Jorhat, Assam) **Patent Ref. No. 0102NF2010**
- C. A protocol of indoor rearing has been developed, following which up to 3rd instar, 80-90 % survivability of muga silkworms and up to 4th instar, 75-85 % survivability of worms can be obtained.
- D. Integrated nutrition management package (Biofertilizer consortium) for castor plant has been developed.

Projects Handled/concluded:

Sl. No.	Title of the project	Funding Agency	Duration of the project	No. of scientists/ Associates working under the project	Total approved cost of the project (Rs. in Lakhs)
01.	All India Co-Ordinated Experimental Trials For Mulberry (AICEM) Phase – II.	CSB	2001-2006	03	<i>In house</i>
02.	All India Mulberry and Silkworm Germplasm Evaluation Programme	CSB	2001-2006	03	<i>In house</i>

03.	National Agriculture Technology Project (NATP) on Plant Biodiversity	ICAR	2002-2004	05	<i>In house</i>
04.	Isolation, characterization and screening of nitrogen fixing and phosphate solubilizing microorganisms from soils.	CSB	2003-2006	01	<i>In house</i>
05.	Assessment of phosphorus and potassium requirements for mulberry based on Mitscherlich-Brey concept.	CSB	2001-2005	03	<i>In house</i>
07.	Assessment of genetic variability of muga silk moth (<i>Antheraea assama</i>) populations using microsatellite markers developed at CDFD, Hyderabad	DBT	2005-2008	03	32.35
08.	Identification, characterization and diagnosis of some important muga silkworm diseases	DBT	2006-2009	03	28.78
09.	Development and standardization of an improved process for cooking and reeling of muga cocoons.	NEC	2006-09	02	10.268
10.	Micro-propagation of muga host plant Som (<i>Persea bombycina</i> Kost)	In house	2006-2009	4	In house
10.	Isolation, identification and characterization of insect stimulants from the muga silkworm host plants and its functional properties".	In house	2009-2012	2	In house
11.	Endocrine regulation of reproduction and enhancement of fecundity in the muga silkworm, <i>Antheraea assamensis</i> " (DST-funded)	DBT	2008-2012	2	35.00
12.	Characterization of soils in different areas of Assam in relation to productivity.	In house	2006-2009	3	In house
13.	: Isolation, identification and Characterization of Insect Stimulants from the Muga Silkworm Host Plants and its Functional Properties (AIP 5850)	CSB	2009-2012	1	In house

14.	Induction of Indoor rearing technique for <i>Antheraea assamensis</i> Helfer through field trials	CSB	Regular Programme	2	-
15.	Isolation and characterization of antifungal peptides from muga silkworm <i>Antheraea assamensis</i> Helfer	DBT	2014-July, 2017	2	32.75

Ongoing projects in hand

Sl. No.	Title of the project	Funding Agency	Duration of the project	No. of scientists/ Associates working under the project	Total approved cost of the project (Rs. in Lakhs)
01.	Effect of plant protection formulations on the growth, development and productivity of Muga Silkworm, <i>Antheraea assamensis</i> Helfer (Saturniidae: Lepidoptera)	CSB	2016-2019	2	15.65
02.	Whole Genome Sequencing and functional genomics of Golden Silk Moth <i>Antheraea assamensis</i>	CSB	2016-2019	2	70.00
03.	Biodiversity assessment of wild silk moths and rearing potentialities of muga (<i>Antheraea assamensis</i> helper) and eri silkworm (<i>Samia ricini</i> Donovan) for sustainable development in Nagaland	DBT	2017-2020 (Recently approved)	1	15.25

Training/symposium/workshop attended:

a) Training attended:

Sl. No.	Name of the Training Programme	Duration	Organizer (s)
1.	Short Term Orientation cum Training on Mulberry Sericultural Technologies	01.08.1995 to 21.8.1995 & 01.9.1995 to 11.9.1995	Muga Seed Development Project, Guwahati, Assam
2.	Short Term Orientation	23.08.1995	Regional Sericultural Research

	cum Training on Mulberry Sericultural Technologies	to 30.8.1995	Station, Jorhat, Assam
3.	Summer Short Course on 'Soil Resource Information and Their Use in Crop Planning in North Eastern Region	18.4.2002 to 27.4.2002	National Bureau of Soil Survey and Land Use Planning, Jorhat, Assam
4.	Training on Statistical methods for Sericultural Research	19.5.03 to 22.5.03	Central Silk Board, Bangalore
5.	Forewarning of Diseases and Pests of food plants and silkworms	13.9.2004 to 14.9.2004	CSR&TI, Berhampore
6	Computer Application	6 Days, June 2004	National Institute of Information Technology, Jorhat
7.	Statistical Methods for Sericultural Research	26.9.2005 to 29.9.2005	Central Silk Board, Bangalore
8.	Training on techniques of Molecular Characterization of Eri Silkworms	10.8.2005 to 31.8.2005	SBRL, Kodathi
9.	Training programme on "Use of in vitro techniques for conservation of plant genetic resources with special reference to mulberry".	30.9.2005 to 06.10.2005	CSGRC, Hosur
10.	Training Programme on Molecular Techniques	13 th September, 2006	M/S Bangalore Genie & Assam Agricultural University, Jorhat, Assam
11.	New technologies for better muga cocoon production organized by NEIST, Jorhat	21.4.08 & 22.4.08	North East Institute of Science & Technology (NEIST), Jorhat, Assam
12.	Training programme on "Calibration in weights & measures"	11-13 August, 2008	Central Food Technological Research Institute, Mysore
13.	Workshop cum Training programme on new technologies for better muga cocoon production organized by NEIST, Jorhat	19.10.08 & 23.10.08	North East Institute of Science & Technology (NEIST), Jorhat, Assam
14.	Biotechnological tools	19.01.2009	North East Institute of Science &

	and techniques for plant biodiversity and conservation studies	to 31.01.2009	Technology (NEIST), Jorhat, Assam
14.	Gas – Phase Mass Spectroscopy	November, 2009	North East Institute of Science & Technology (NEIST), Jorhat, Assam
14.	Workshop cum training programme for healthy larvae and production of quality muga silk	04.5.2010 to 06.5.2010	North East Institute of Science & Technology (NEIST), Jorhat, Assam.
15.	New Chromatography, Tips & Tricks	13.8.2010	Agilent Technologies at Jorhat, Assam.
16.	Training on “Preparative methods for Transmission Electron Microscopy	22.3.2011 to 25.3.2011	North Eastern Hill University, Shillong.
17.	Thematic Meeting on Application of Radiation Technology and Radioisotopes in the field of Agriculture, Food and Health	28.5.2014 to 30.5.2014	BARC, Trombay & AAU, Jorhat, Assam
18.	Training programme on “Extension System Management”	23.02.2015 to 27.02.2015	Indian Institute of Agricultural Research Management, Hyderabad
19.	Training programme on “Work Ethics for Development Professionals”	10.8.15 to 12.8.15	Indian Institute of Agricultural Research Management, Hyderabad
20.	Training Programme on “Egg microinjection and germline transformation system in Eri silkworm – <i>Samia cynthia ricini</i> (especially CRISPR / Cas9- mediated genome engineering)”. Sponsored by Ministry of Textiles, Govt. of India	06.03.17 to 10.03.17	Laboratory of Insect Genetics and Bioscience Department of Agricultural and Environmental Biology, Graduate School of Agricultural and Life Sciences, The University of Tokyo

Training imparted

Batch	Duration	No. of Trainees / Farmers	State	Programme / Scheme	Subjects Covered

1	22/01/07 to 05/02/07	15	Assam & Meghalaya	Muga Culture Technologies Under CDP- Scheme	Improved technologies of muga silkworm rearing, egg incubation, black boxing, pre- brushing care, use of nylon nets, hatching, brushing, transferring of worms, mounting and harvesting of cocoons.
2	08/02/07 to 17/02/07	25	-Do-	-Do-	-do-
3	19/02/07 to 28/02/07	27	-Do-	-Do-	-do-
4	05/03/07 to 14/03/07	39	-Do-	-Do-	-do-
5	16/03/07 to 25/03/07	33	-Do-	-Do-	-do-
6.	02.4.2007 to 11.4.2007 (At Field Laboratory, Titabar)	29	Assam & Meghalaya	Augmentation of muga silkworm seed under special CDP Scheme	-do-
7.	03.5.2007 to 12.05.2007	24	Assam	-do-	-do-
8.	28.6.07 to 07.7.07	10	Assam & Meghalaya	-do-	-do-
9.	16.7.07 to 25.7.07	10	Assam & Meghalaya	-do-	-do-
10.	2.10.2007 to 12.10.07	18	-do-	-do-	-do-
11.	25.10.07	22	-do-	-do-	-do-
12.	7.11.07	25	-do-	-do-	-do-
13.	13-14/11/07	15	Students from Assam Agricultural University	Nil	Muga & Eri Culture
14.	22.11.07	25	Assam & Meghalaya	-do-	-do-
15.	21.01.08	25	-do-	-do-	Improved Technology in Muga culture
16.	04.02.08 to 08.2.08 (At RERS, Mendipathar)	42	Assam & Meghalaya	-do-	Improved Technology in Muga culture
17.	16.2.08 to 20.2.08 (At RERS, Mendipathar)	23	Assam & Meghalaya	-do-	Improved Technology in Muga culture
18.	17.03.2008 to	25	Assam & Meghalaya	-do-	Improved Technology in Muga culture

	26.03.2008				
19.	21.4.08 to 22.4.08 Training programme on new technologies for better muga production	25	Assam	Improved Technology in Muga culture	Improved Technology in Muga culture Organized by NEIST, Jorhat
20.	21.4.08 to 11.5.08	15	West Bengal	Improved technology in Eri culture	Improved technology in Eri silkworm rearing
21.	14.02.15 to 28.02.15	50	Farmers	Integrated Skill Development Training to farmers on Muga Silkworm Rearing	Muga Silkworm Host Plant Diseases & Pests Management
22.	11.03.15 to 25.03.15	50	Farmers	Integrated Skill Development Training to farmers on Muga Silkworm Rearing	Muga Silkworm Host Plant Diseases & Pests Management
23.	16.11.15 to 31.12.2015	63	Scientists of CSB	Training Programme on Muga and Eri Culture Technology for newly appointed scientists in CSB	Muga Silkworm Rearing Management and ISO Certification
24.	1.8.16 to 5.8.16	30	DoS	Improved rearing technology in muga culture	Improved rearing technology in muga culture
25.	22.8.16 to 28.8.16	35	CSB & DoS	Technology Orientation Programme for CSB Officials	Muga Silkworm Host Plant Management
26.	13.09.16 to 17.09.16	60	Farmers	Farmers Training on Muga Culture	Muga Silkworm Host Plant Diseases & Pests Management
27.	04.01.17 to 13.01.17	60	CSB & DoS Technical Officers	Pre-cocoon Technology of Muga and Eri Silk	Muga Silkworm Rearing Management

b. Symposium/workshop / Seminars attended:

SI. No.	Title of the workshop / Seminar etc.	Duration	Organizer (s)
1.	National workshop on Sericultural Germplasm Management & Utilization	06.02.2002 to 07.02.2002	CSGRC, Hosur
2.	National workshop on Pre-breeding Strategies for Utilization of Sericultural Germplasm Resources	19.02.2003 to 20.02.2003	CSGRC, Hosur

3.	National workshop on Role of Seri Genetic Resources in Cocoon Crop Improvement	23.11.2004 to 24.11.2004	CSGRC, Hosur
4.	Workshop on "Management of pests and diseases of Muga, Eri and Mulberry silkworms and their host plants	9-10 March, 2004	CMER&TI, Lahdoigarh
5.	Workshop on Strategies for Non-Mulberry Germplasm Maintenance	10.03.2005 to 11.03.2005	CMER&TI, Jorhat & CTR&TI, Ranchi
6.	Seminar on Awareness of Recent Advances in Science & Technology	16.03.2005 to 17.03.2005	RRL, Jorhat
7.	Awareness Programme on Application of Radioisotopes and Radiation Technology for Societal Benefit	26.10.2005 to 27.10.2005	RRL, Jorhat, NAARI & Britt, Dept. of Atomic Energy, Govt. of India
8.	Workshop on Disease and Pests Forewarning System for Muga Silkworm & Host Plants	05.12.2005	CMER&TI, Lahdoigarh
9.	20 th Congress of the International Sericultural Commission	15.12.2005 to 18.12.2005	International Sericultural Commission, France
10.	Brain Storming Session / Workshop on the Strategy for Development of Silk Industry during XI Plan	27.06.2006 to 29.6.2006	Central Silk Board & The Energy and Resources Institute (TERI)
11.	Regional Workshop on Forestry Extension	18.07.2006	Rain Forest Research Institute, Jorhat
12.	Regional Workshop on Safety Assessment & Regulation of GM Crops with a special focus on Cartagena Protocol on Biosafety.	28.08.2006 to 29.08.2006	Organized by Biotech Consortium India Ltd. & Assam Agril. University, Sponsored by Ministry of Environment & Forests, Govt. of India, Held at AAU, Jorhat, Assam
13.	Workshop on Molecular Techniques	13 th September, 2006	M/S Bangalore Genie & Assam Agricultural University, Jorhat, Assam
14.	National Workshop on Eri Food Plants	11-12 October 2006	CMER&TI, Jorhat at Guwahati
15.	National Symposium on Entrepreneurship in Biotechnology : Scope and Prospects in North East India	20.01.2007 to 21.01.2007	Indian Institute of Technology, Guwahati & Indian Chambers of Commerce & Industries, NE Chapter.
16.	UGC sponsored National Seminar on "Recent Trends on Biological Research Towards Rural Development"	13-14 October, 2007	Chaiduar College, Gohpur, Sonitpur, Assam.
17.	2 nd Asian Congress of	December 19-22, 2007	Department of Botany,

	Mycology and Plant Pathology".		Osmania University, Hyderabad, AP., India.
18.	Workshop cum Training programme on new technologies for better muga production	21.4.08 to 22.4.08 19.10.2008 to 23.10.2008	North East Institute of Science & Technology (Formerly RRL), Jorhat, Assam.
19.	National Workshop on "Strategies for conservation and utilization of non-mulberry genetic resources"	27.9.2008	Central Tasar Research & Training Institute, Ranchi
20.	National Conference on "Frontiers in Plant Physiology towards Sustainable Agriculture".	5-7 November, 2009	Assam Agricultural University
21.	Seminar cum Workshop on Gas Phase Mass Spectrometry	13.11.2009	North East Institute of Science & Technology (Formerly RRL), Jorhat, Assam.
22.	Workshop / Training Programme on Sericulture for Healthy Larvae and Production of Quality Muga Silk	4 th to 6 th May 2010	Indian Institute of Chemical Technology in Collaboration with North East Institute of Science & Technology (Formerly RRL), Jorhat, Assam at Sivasagar, Jorhat.
23.	National Seminar on "Recent Trends in Research & Development in Muga Culture- Ideas to Action"	3-4 May, 2012	Central Muga Eri Research & Training Institute (CMER&TI), Central Silk Board, Lahdoigarh, Jorhat & Muga Silkworm Seed Organization (MSSO), Central Silk Board, Guwahati
24.	103 rd Convention of the Indian Science Congress Association, Kolkata, Jorhat	3-7 Jan., 2016	ISCA & Mysore University, Mysore
25.	1st Annual Meeting of Society of Biological Chemists (I), North East Chapter & Symposium	22 nd Feb., 2014	North East Institute of Science & Technology (Formerly RRL), Jorhat, Assam.
26.	Thematic Meeting (A National programme for peaceful use of atomic energy)	28-30 May, 2014	BARC, Trombay, Mumbai and Assam Agricultural University, Jorhat
27.	Workshop on PCR-based detection of silkworm diseases	18-19 Sept., 2014	Seribiotech Research Laboratory (SBRL), Central Silk Board, Bangalore
28.	National Seminar on "Problems & Prospects of Muga and Eri Silk Sectors"	25-26 Feb., 2016	CMER&TI, Central Silk Board, Lahdoigarh, Jorhat.
29.	National Workshop on "Emerging Needs and Critical Gaps in Muga & Eri Seed Sectors	10-11 March, 2016	MSSO, Central Silk Board, Guwahati
30.	Silver Jubilee cum National Conference on Mulberry Seri-Biodiversity – Challenges and Future	8 Sept., 2016	Central Sericultural Germplasm Resources Centre, Hosur, Tamil Nadu

	Perspective for Sustainable Conservation and Utilization		
31.	Brainstorming Session on Sericulture Technology "Seritech 2017"	24 Jan, 2017	Indian Institute of Technology (IIT), Guwahati
32.	Workshop on "Sericulture Development in NE States"	06-08 Feb., 2017	Extension Education Institute (NE Region)
33.	Workshop on "Economic Insects of North East India and their utilization for sustainable Development"	21.2.17 to 22.2.17	CMER&TI, Central Silk Board, Lahdoigarh, Jorhat, at Kokrajhar

Professional Membership:

1. Life Member of the Black, Caspian Seas and Central Asia Silk Association (BACSA).
2. Life Member of the National Academy of Sericulture, India, Bangalore.
3. Life Member of the Indian Academy of Sericulture, Bhubaneswar.
4. Life Member of North East Biotechnological Association, Guwahati.
5. Life Member of the Indian Science Congress Association, Kolkata (Membership No. L14548).
- 6. Life Member of Society of Biological Chemists, India (Membership No. 2222).**
7. Ordinary Member of Indian Society of Agricultural Chemists, Allahabad.
8. Ordinary Member of Indian Society of Entomology, New Delhi
9. Executive Member of Assam Science Society, Assam.
10. Ordinary Member of Indian Society of Genetics & Plant Breeding.

Skills and Techniques known:

- I. Instrumentation (e.g., HPLC, GC, AAS, Colorimeter, Spectrophotometer, Electrophoresis, analytical equipments, etc.)
- II. Having working knowledge on colorimeter, spectrophotometer, Soxhlet apparatus, PCR machine, Geldoc System, Gel Electrophoresis systems etc.
- II. Computer application: Expertise in Windows application, MS office such as MS word, Excel, Power Point, Outlook, Internet etc.
- III. Statistical analysis by SPSS System.
- IV. ISO 9001 : 2015 Certification Audit

List of Publication

A. Publication in Research Journals

1. Chetia H, Kabiraj D, Sharma S, Das S, Mosahari PV, Sharma P, **Neog K**, Deka M, Jayaprakash P and Bora U. (2017). *De novo* transcriptome analysis of the muga silkworm, *Antheraea assamensis* (Helfer). *Gene*, 0378-1119, 10.1016/j.gene.2017.02.021. (Impact factor: 2.415).
2. Tilak Nayak, Santi M.Mandal, **Kartik Neog**, Ananta K. Ghosh (2017). Isolation and Identification of a Gloverin like Antimicrobial Peptide from *A. assamensis*. *International Journal of Peptide Research and Therapeutics.*, doi.org/10.1007/s10989-017-9618-0. (Impact factor: 0.904).
3. D. K. Gogoi, S. P. Sandilya, P. M. Bhuyan, P. Dutta, **K. Neog**, L.S.K. Singh and T. C. Bora (2016). Effect of submerged culture parameters on growth and antimicrobial activity of *Paenibacillus lautus* RRTAY-2 against some pathogens of *Antheraea assamensis* Helfer. *Sericologia* 56(2): 103-116.
4. B. C. Chutia, C. Nath, **K. Neog** and L.N. Kakati (2016). Conservation strategies of *Actias selene* Hubner: A wild silk moth in Nagaland, India, *Environment Conservation Journal* 17(1&2), 41-45, 2016 ISSN 0972-3099 (Print) 2278-5124 (Online)
5. Arpan Kumar Das, Bulbuli Khanikor, **Kartik Neog** (2016). Biology of *Cotesia dictyoplocae* Watanabe (Hymenoptera: Braconidae) a parasitoid of *Antheraea assamensis* Helfer (Lepidoptera: Saturniidae), *J. Ent. & Zool. Studies* 4(2): 236-240.
6. Ankita Gupta, Arpan Kumar Das, **Kartik Neog** and Abraham Verghese (2016). First report of *Cotesia dictyoplocae* (Watanabe) (Hymenoptera: Braconidae) from India, a larval parasitoid of *Antheraea assamensis* Helfer (Lepidoptera: Saturniidae), accepted for publication in the journal "*Florida Entomologist*". Volume 99, No. 3, 541-543.
7. **Kartik Neog**, P. Dutta and D. Goswami (2015). Studies on moisture retention capacity of som and soalu genotypes and its impact on survival of early instar muga silkworm *Antheraea assamensis* Helfer under indoor conditions, *World Journal of Pharmaceutical Research*, Volume 4, Issue 7, XXX-XXX, ISSN 2277– 7105.
8. **K. Neog** (2015). Prospects for enhancement of productivity in muga culture. Souvenir of the 17th *Conference of Field Level Officers Association, Assam State Agricultural Marketing Board*, 28th – 29th November, 50-56.
9. Dhiramani Bhuyan, K. Dutta M.C. Sharma, B.N. Sarkar and **K. Neog** (2015). Effect of Differential Feeding on Eri Silk Worm (*Samia Ricini* Donovan) and its Pupal Protein Concentration, *Intl. J. of Edn. and Sci. Res.*, Vol II (5). 21-24.
10. **Neog K**, Dutta P, Changmai A, Goswami D, Choudhury B (2015) Comparative Study on the Rearing Performance of Muga Silkworm under Indoor and Outdoor Rearing Conditions. *Int. J. Agricultural Sci. Food Technology* 1(2): 020-024.
11. Kartik Neog, Bala G Unni , Sudip Dey, Collin Z. Renthlei, S G Eswara Reddy, Palash Dutta, Porismiti Sonowal and Rama Krishna Rajan (2014). Studies on the endocrine regulation of reproduction and ultra structure of brain and reproductive organs of muga silkworm *Antheraea assamensis*, Helfer (Lepidoptera: Saturniidae). *World Journal of Pharmacy and Pharmaceutical Sciences*, Volume 3, Issue 1, XXX-XXX. Research Article ISSN 2278 – 4357.
12. B.C. Chutia, C. Nath, L.M. Goswami, B. Goswami, L. Gogoi and **K. Neog**. (2014). Life history of *Antheraea frithi* Moore, (Lepidoptera: Saturniidae) on *Terminelia arjuna* (Roxb.)

- W&A Syn. in North Eastern Region of India. *Proc. Natl. Sci., India*, Sect. B. Biol. Sci. DOI: 101007/s40011-014-0411-y.
13. Palash Dutta, P. Dutta, A. K. Rai and **K. Neog** (2013). Improvement of rearing performance in muga silkworm *Antheraea assamensis* with hormone treatment, *Mun. Ent. Zool.* 8(2), 767-771.
 14. M.C. Sarmah, K. Neog, A. Das¹, J.C.D. Phukan (2013). Impact of soil fertility and leaf nutrients status on cocoon production of Muga silkworm, *Antheraea assamensis* (Helfer) in potential muga growing areas of Assam, India. *Int.J.Curr.Microbiol.App.Sci* (2013) 2(9): 25-38 ISSN: 2319-7706 Volume 2 Number 9 (2013) pp. 25-38; <http://www.ijcmas.com>.
 15. **Kartik Neog**, G.U. Ahmed, B.G. Unni, P. Dutta, D.K. Gogoi and K. Giridhar (2013). Variation in biochemical composition of different hosts plants of Muga silkworm, *Antheraea assamensis*, Helfer. *Sericologia*, 53 (3&4): 207-218.
 16. Y.T. Singh, S.M. Leighton, M. Saikia, P. Pant, S. Kashung, **Kartik Neog**, R. Chakrtavorty, S. Nair, J. Nagaraju and C.R. Babu (2012). Genetic variation within native population of endemic silkworm *Antheraea assamensis* (Helfer) from Northeast India indicates need for in Situ conservation. *PLoS ONE*, 7(11); e49972, doi:10.1371/journal.pone.0049972. (Impact factor: 3.54).
 17. **Kartik Neog**, Balagopalan Unni and Giasuddin Ahmed (2011) Studies on the influence of host plants and effect of chemical stimulants on the feeding behaviour in the muga silkworm, *Antheraea assamensis*, Helfer, *J. Insect Science*, (IF: **2.60**) 11:139; available online: insectscience.org/11.139.
 18. Unni, B.G.; Singh, H.R., **Neog, K.**; Bhattacharya, M. and Wann, S.B. (2011). Isolating silkworm genomic DNA without liquid nitrogen suitable for marker studies. *African Journal of Biotechnology* (IF: **0.573**) Vol. **10(55)**: 11365-11372.
 19. Ranuma Das, **K. Neog**, M. Pamehgam and U. C. Borua (2011). Effect of vermicompost application on leaf yield of mulberry and cocoon characters of silkworm *Bombyx mori* in the north eastern region of India. *J. Ind. Acad. Seric.* (Non-IF) **15(1)**: 49-52.
 20. M.C. Sarmah, Ranjana Das, **K. Neog**, G. Rajkhowa, M. Chutia, R.K. Rajan (2011). Evaluation of promising castor genotype in term of agronomical and yield attributing traits, biochemical properties and rearing performance of *Samia ricini* Donovan, *Ind. Crops Prod.* (IF: **2.507**) (2011), doi: 10.1016 /j.indcrop. 2011.04.022.
 21. **Neog K**, Das A, Unni BG, Ahmed GU and Rajan RK (2011) Studies on Secondary metabolites of Som (*Persea bombycina* Kost), a primary host plant of Muga silkworm (*Antheraea assamensis* Helfer), *Int. J. PharmTech Res.* (Online access) **3(3)**: 1441-1447.
 22. H. R. Singh, B. G. Unni, **K. Neog** and M. Bhattacharyya (2011). Sodium dodecyl sulfate polyacrylamide gel electrophoresis (SDS-PAGE) and random amplified polymorphic DNA (RAPD) based genetic variation studies in eri silkworm (*Samia cynthia ricini* Lepidoptera: Saturniidae). *African Journal of Biotechnology* (IF: **0.573**) Vol. **10(70)**: 15684-15690.
 23. **Kartik Neog**, H. Ranjit Singh, Balagopalan Unni and A.K. Sahu (2010). Analysis of Genetic Diversity of Muga Silkworm (*Antheraea assamensis*, Helfer; Lepidoptera : Saturniidae) using RAPD-Based Molecular Markers, *African J. Biotech.* 1746-1752.
 24. Brijmohan Singh Bhau, Kalyani Medhi, Ambrish P. Das, Siddhartha P. Saikia, **Kartik Neog**, S.N. Choudhury (2009). Analysis of *Persea bombycina* "Som" Using RAPD Based

- Molecular Markers, *Biochem. Genet.*, DOI 10.1007/s10528-009-9242-6, Published online on 8th May 2009.
25. K. Neog, R. Chakravorty, G.M. Deka & T. Zamal (2008) Morphological characterization and rearing performance of Muga silkworm *Antheraea assamensis* Helfer germplasm accessions, *Sericologia* **48**(3), 301-310.
 26. B.G. Unni, Utpala Bora, H.R. Singh, B.S. Dileep Kumar, Barnali Devi, S.B. Wann, Archana Bora, B.S. Bhau, K. Neog and R. Chakravorty (2007). High yield and quality silk fibre production by Muga Silkworm, *Antheraea assama* through the application of Plant Growth Promoting Rhizobacteria. *Curr. Sc.*, 94(6), 768-774.
 27. K. Das, R. Das, Pranab Dutta, P. Deb Nath, R. Chakravorty, S.A.S. Rahman, K. Neog, I, Sarmah and M. Islam (2007). First report on some important endo-mycoflora of *Antheraea assamensis* Helfer (Lepidoptera: Saturniidae) from North east India. *Sericologia* **47**(2): 225-228.
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 30. S. N. Gogoi, R. Chakravorty, K. Neog and P. L. Ghosh (2006) Induced autotetraploidy in som *Persea bombycina* Kost. and its rearing performance of Muga silkworm *Antheraea assamensis* Helfer, *Perspective in Cytology and Genetics*, 2006, 12: 169-183.
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 32. K. Neog and R. Chakravorty (2005) Character Association with leaf yield in Mulberry (*Morus alba* L.) under climatic conditions of North East India, *GEOBIOS*, **32**, 194-196.
 33. R. Chakravorty, K. Neog, B. C. Goswami, L. K. Hazarika and P. Talukdar (2005) Genotype x environment interaction and phenotypic stability for rearing performance of silkworm (*Bombyx mori*) in mulberry varieties. *Indian J. Seric.* **44** (1) 35-39.
 34. R. Chakravorty, K. Neog, N. Suryanarayana and L.K. Hazarika (2004). Feeding and moulting behaviour of muga silkworm (*Antheraea assama*) on different food plants. *Sericologia*, **44**(2) 145-152.
 35. R. Chakravorty, K. Neog, B. C. Goswami and L. K. Hazarika (2004) Evaluation of mulberry varieties through bioassay for moulting response, rearing performance and biochemical analysis of leaves in Assam. *Indian J. Entomon.* **66** (3): 241-245.
 36. R. Chakravorty, K. Neog, R. Das and P. K. Dutta (2004) Seasonal incidence of major foliar fungal diseases of mulberry in North East India. *Indian J. Seric.*, **42**(2) 122-127.

B. Research paper publications/presentations in (Seminar / Workshop):

1. **Kartik Neog**, Anupam Changmai and B. Choudhury (2016). Evaluation of different host plants in terms of biochemical properties, rearing performance and cocoon characters of muga silkworm *Antheraea assamensis* Helfer. Paper presented at 103rd Conference of Indian Science Congress Association held at Mysore, 3-7th January, 2016.

2. **K. Neog** and B. Choudhury (2016). Preliminary report on the effect of phytoecdysteroid Sampoorna on synchronization of maturation and cocoon characters in silkworm *Antheraea assamensis*, Helfer. Paper presented in the National Seminar on “Problems & Prospects of Muga and Eri Silk Sectors” organized by CMER&TI, CSB, Lahdoigarh, Jorhat at Indian Institute of Entrepreneurship, Lalmati, Guwahati, w.e.f. 25th to 26th February’ 2016
3. Anupam Changmai, Palash Dutta, Dip Gogoi and **Kartik Neog** (2016). Antimicrobial Peptides: Role in Silkworm Immunity. Paper presented in the National Seminar on “Problems & Prospects of Muga and Eri Silk Sectors” organized by CMER&TI, CSB, Lahdoigarh, Jorhat at Indian Institute of Entrepreneurship, Lalmati, Guwahati, w.e.f. 25th to 26th February’ 2016
4. **K. Neog**, P. Dutta, D. Gogoi, D. Mech and B. Choudhury (2016). Insect stimulants on the growth, development and productivity of muga silkworm, Paper presented in the National Seminar on Emerging needs and Critical Gaps in Seed production in Muga & Eri Sector organized by MSSO, CSB, Guwahati w.e.f. 10th & 11th March, 2016.
5. **K. Neog** and B. Choudhury (2016). Field efficacy of *Terminelia chebula* based bioformulation “Muga Heal” for healthy larvae and production of quality silk fibre by muga silkworm. Paper presented in the National Seminar on Emerging needs and Critical Gaps in Seed production in Muga & Eri Sector organized by MSSO, CSB, Guwahati w.e.f. 10th & 11th March, 2016..
6. S P Sandilya, P M Bhuyan, D Kardong, **K Neog** and D K Gogoi (2016). *Bacillus firmus* MAJ PSB12, A P solubilizing rhizobacteria and its plant growth promoting ability in eri silkworm host plant castor (*Ricinus communis* L). Paper presented in the National Seminar on “Problems & Prospects of Muga and Eri Silk Sectors” organized by CMER&TI, CSB, Lahdoigarh, Jorhat at Indian Institute of Entrepreneurship, Lalmati, Guwahati, w.e.f. 25th to 26th February’ 2016.
7. P M Bhuyan, S P Sandilya, D. Kardong, **K Neog** and D K Gogoi (2016). Isolation and characterization of lipase producing gut-bacteria of muga silkworm (*Antheraea assamensis* Helfer) reared in different localities of Assam. Paper presented in the National Seminar on “Problems & Prospects of Muga and Eri Silk Sectors” organized by CMER&TI, CSB, Lahdoigarh, Jorhat at Indian Institute of Entrepreneurship, Lalmati, Guwahati, w.e.f. 25th to 26th February’ 2016.
8. **K. Neog** (2015). Prospects for enhancement of productivity in muga culture. Souvenir of the 17th Conference of Field Level Officers Association, Assam State Agricultural Marketing Board, 28th – 29th November, 50-56.
9. P. Dutta, P. Dutta, A.K. Rai and **K. Neog** (2013). Study on the Biochemical and Ultra Structural Changes After Application of Juvenile Hormone-III and 20-Hydroxyecdysone on Muga Silkworm *Antheraea assamensis* Hefler. Abstract in the Proceedings of the 100th Session of the Indian Science Congress; 3-7 January, 2013. pp. 83.
10. S.P. Sandilya, P.M. Bhuyan, P. Dutta, **K. Neog** and D.K. Gogoi (2013). Analysis of soil biological properties in Castor (*Ricinus communis* L.) cultivated soils: A possible index towards soil fertility. Paper presented in the National Seminar on ‘Research in Biological Sciences for sustainable development by the application of Mathematics and allied branches’ Bahona College, Jorhat, Assam w.e.f 10th - 11th May, 2013.
11. P.M. Bhuyan, S.P. Sandilya, P. Dutta, **K. Neog** and D.K. Gogoi (2013). Study of phyllosphere microflora of Muga silkworm host plant *Persea bombycina* Kost (Som) leaves in four farms of Jorhat District, Assam. Paper presented in the National Seminar on ‘Research in Biological Sciences for sustainable

- development by the application of Mathematics and allied branches'* Bahona College, Jorhat, Assam w.e.f 10th - 11th May, 2013.
12. **Kartik Neog**, G. U. Ahmed, B. G. Unni, P. Dutta, D.K. Gogoi and K. Giridhar (2013). Rearing performance and cocoon characters of muga silkworm *Antheraea assamensis* Helfer as influenced by biochemical composition of its different host plants. Paper presented in the 1st Bodoland National Seminar cum workshop "Sericulture Industry and its Role in Socioeconomics, Bodoland University, Kokrajhar held on 10-11 August, 2013.
 13. **Kartik Neog**, Bala G. Unni, Sudip Dey, Collin Z. Renthlei, Palash Dutta, and K. Giridhar (2013). Effect of JH-III and 20-Hydroxy Ecdysone on Reproductive Behaviour of Muga Silkworm *Antheraea assamensis*, Helfer (Lepidoptera: Saturniidae). Abstract published in the National Conference on Recent Advances in Modern Biology & Sericulture for Women Empowerment and Rural Development (RAMBSWERD) organized by Karnataka State Sericulture Research and Development Institute in association with Deptt. of Sericulture, Govt. of Karnataka and MSET- International Consortium of Contemporary Biologists, Jharkhand; w.e.f. 24th to 26th Oct, 2013.
 14. **Kartik Neog** and B.G. Unni (2013). Genetic Variability in Eri Silkworm (*Samia cynthia ricini* Lepidoptera: Saturniidae) populations using SDS-PAGE and RAPD. Abstract published in the National Conference on Recent Advances in Modern Biology & Sericulture for Women Empowerment and Rural Development (RAMBSWERD) organized by Karnataka State Sericulture Research and Development Institute in association with Deptt. of Sericulture, Govt. of Karnataka and MSET- International Consortium of Contemporary Biologists, Jharkhand; w.e.f. 24th to 26th Oct, 2013.
 15. B.G. Unni and **K. Neog** (2012). Current trend of biotechnological and molecular research in muga silkworm, *Antheraea assamensis*, Helfer and future prospects. National Seminar on "Recent Trends in Research & Development in Muga Culture – Ideas to Action", 3-4th May, 2012, Guwahati, Assam. Pp. 12-20.
 16. **K. Neog**, N. Singha and R.K. Rajan (2012). Variations in biochemical constituents of healthy and diseased muga silkworms, *Antheraea assamensis*, Helfer. Compendium of Seminar Papers, National Seminar on "Recent Trends in Research & Development in Muga Culture – Ideas to Action", 3-4th May, 2012, Guwahati, Assam. Pp. 30-34.
 17. P. Dutta, P. Sonowal and **K. Neog** (2012). Study on the effect of juvenile hormone III on rearing performance and ovarian development of muga silkworm *Antheraea assamensis*, Helfer. Compendium of Seminar Papers, National Seminar on "Recent Trends in Research & Development in Muga Culture – Ideas to Action", 3-4th May, 2012, Guwahati, Assam, pp. 34-38.
 18. **Kartik Neog**, Biran Rana, Arpan Das and R.K. Rajan (2012). Moisture retention capacity of som and soalu genotypes as a factor on survival of early instar muga silkworms *Antheraea assamensis* Helfer under indoor conditions, Compendium of Seminar Papers, National Seminar on "Recent Trends in Research & Development in Muga Culture – Ideas to Action", 3-4th May, 2012, Guwahati, Assam, pp. 77-81.
 19. **K. Neog**, BG Unni, GU Ahmed and RK Rajan (2011). Effect of certain chemicals on the rearing performance of muga silkworm *Antheraea assamensis*, Helfer. Paper presented in the National Seminar on "Biochemical & Biotechnological Research Approaches for Bioresource Management of North-East India Towards Sustainable Rural Development", 11th & 12th Nov., 2011, Bishwanath College of Agriculture, Assam Agricultural University, Bishwanath Charali, Assam.

20. **K. Neog** (2011). Improved practices of muga silkworm rearing. Paper presented in the Seminar cum workshop on “Sericulture for better and quality silk production” organized by North East Institute of Science & Technology and Indian Institute of Chemical Technology, Hyderabad on 25th-27th July, 2011 at Sivasagar, Assam.
21. B.G. Unni and **Kartik Neog** (2011). Recent trend of biotechnological and molecular research in non-mulberry silkworm, *Antheraea assamensis* Helfer. Proceedings of the 22nd Congress of the International Sericultural Commission, 14th – 18th December, 2011, Thailand. Pp. 155-161.
22. Kartik Neog, RK Saha, BN Choudhury, D. Goswami, Sarat Saikia and RK Rajan (2009). Rearing performance of muga silkworm (*Antheraea assamensis*, Helfer) accessions under varied climatic conditions. Paper presented in the National Conference on “Frontiers in Plant Physiology towards Sustainable Agriculture”, 5-7 November, 2009, Assam Agricultural University, Jorhat.
23. R. Chakravorty, A.K. Sahu and Kartik Neog (2009). Muga silkworm germplasm resources and their utilization for sustainable development of muga culture, Status paper, Proceedings of the papers presented in the National workshop on “Vanya Silk” under the aegis of NASSI, organized by CMER&TI, Jorhat, Assam on 28-30th January, 2009, Pp. 1-10.
24. J. C. D. Phukan, M. Pamehgam, K. Neog and R. Chakravorty (2009). A sustainable organic manuring approach for improvement of muga host plant *Persea bombycina* Kost., Proceedings of the papers presented in the National workshop on “Vanya Silk” under the aegis of NASSI, organized by CMER&TI, Jorhat, Assam on 28-30th January, 2009, Pp. 168.
25. Pranab Dutta, P.D. Nath, K. Neog, K. Das, R. Das, P.K. Handique, M. Sankar and R. Chakravorty, (2009). An innovative approach for management of bacterial disease of muga silkworm, Proceedings of the papers presented in the National workshop on “Vanya Silk” under the aegis of NASSI, organized by CMER&TI, Jorhat, Assam on 28-30th January, 2009, Pp. 195.
26. 6. B. Rana, K. Neog, M. Sankar and R. Chakravorty (2009). Moisture content of som and soalu genotypes in relation to age of leaf and season, Proceedings of the papers presented in the National workshop on “Vanya Silk” under the aegis of NASSI, organized by CMER&TI, Jorhat, Assam on 28-30th January, 2009, Pp. 267.
27. R. Chakravorty, **K. Neog**, A.K. Sahu, R. Singh & B.G. Unni (2008). Morpho-molecular characterization of muga silkworm *Antheraea assamensis*, Helfer (Lepidoptera : Saturniidae), Paper presented in the XXIth Congress of the International Sericultural Commission held w.e.f. 03-06 November, 2008 at Athens, Greece. - Oral presentation.
28. R. Chakravorty, K. Das, Pranab Dutta, R. Das, **K. Neog**, S. A. S. Rahman, and P. D. Nath (2008). Entomopathogenic fungi of Muga silk worm (*Antheraea assamensis*, Helfer) from North East India, Paper presented in the XXIth Congress of the International Sericultural Commission held w.e.f. 03-06 November, 2008 at Athens, Greece. – Poster presentation.
29. **K. Neog** and R. Chakravorty, (2008). Isolation of few disease tolerant muga silkworm (*Antheraea assamensis* Helfer) genotypes, Paper presented in the XXIth Congress of the International Sericultural Commission held w.e.f. 03-06 November, 2008 at Athens, Greece - Poster presentation.
30. R. Chakravorty, K. C. Singh, **K. Neog**, B. B. Singha, B. N. Sarkar, S.A.S. Rahman, Pranab Dutta, H.J. Anuradha, N. Rawat, A.R. Pradeep, C.V. Nair, A.K. Awasthe, S. Raje Urs (2008). Morpho-molecular characterization of Eri silkworm,

- Samia ricini* Donovan (Lepidoptera : Saturniidae), Paper presented in *the XXIth Congress of the International Sericultural Commission* held w.e.f. 03-06 November, 2008 at Athens, Greece - Oral presentation.
31. S. A. S Rahman, M. C. Sarmah, **K. Neog** & R. Chakravorty (2008). *In vitro* shoot proliferation of muga food plant, som (*Persea bombycina* Kost.), Paper presented in *the XXIth Congress of the International Sericultural Commission* held w.e.f. 03-06 November, 2008 at Athens, Greece - Oral Presentation
 32. **K. Neog** and R. Chakravorty (2008). Seasonal variation and forewarning model of important muga silkworm diseases under climatic conditions of Assam. Paper presented in the *XXIth Congress of the International Sericultural Commission* held w.e.f. 03-06 November, 2008 at Athens, Greece - Poster Presentation.
 33. R. Chakravorty and **Kartik Neog** (2008). Conservation and Utilization of Muga and Eri Seri-Biodiversity for Sustainable Production of Non-Mulberry Silks, Base Paper presented on the Workshop on “*Strategies for Conservation and Utilization of Non-mulberry Genetic Resources*”, held at CTR&TI, Ranchi on 27th September, 2008.
 34. J. D. Phukan, **K. Neog** and R. Chakravorty (2008). Effect of organic farming on leaf yield and rearing performance of muga silkworm host plant som (*Persea bombycina* Kost). Paper presented in the “*National Workshop*” held at Gargaon College, Assam.
 35. R. Chakravorty, Pranab Dutta and **K. Neog**, Muga seed crop rearing and grainage management, Base Paper presented in the Workshop on “*Strategy for Privatization of Muga and Eri Seed Production*” February, 2008 at MSSO, Guwahati, Assam.
 36. R. Chakravorty, **K. Neog** and Pranab Dutta (2008). Technology based strategy for development of sericulture in Northeast India, Base Paper presented in the National Workshop on “*Assam Gas Cracker Downstream Processing*” 15-16th February, 2008 at NEIST, Jorhat, Assam.
 37. **K. Neog** R. Chakravorty and S.N. Gogoi (2007). Evaluation of Som (*Persea bombycina*) germplasm accessions through bioassay for rearing performance and biochemical analysis of leaves; *Proceedings of the International Conference on “Sericulture Challenges in the 21st Century (Serichal-2007)”* held at Bulgaria on 18-21 September, 2007, 81-87.
 38. **Neog, K.**, Deka, G.M. and Chakravorty, R. (2007). Variation of protein content in the haemolymph of healthy and diseases silkworm of *Antheraea assamensis* Helfer, Paper presented in the “*19th National Congress of Parasitology & International Symposium on Parasitic Diseases of Animals and Man*”, 26th – 28th October, Visakhapatnam.
 39. **K. Neog** and R. Chakravorty (2007). A new strain of *Sporobolomyces roseus* Kluyver & Van Neil capable of solubilizing insoluble phosphate identified. Paper presented in the “*2nd Asian Congress of Mycology and Plant Pathology*”, December 19-22, 2007, Department of Botany, Osmania University, Hyderabad, AP., India.
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3. Muga Polu Palonor Unnat Podhati (Improved technologies for muga silkworm rearing).
4. Eri Polu Palonor Unnat Podhati (Improved technologies for eri silkworm rearing).
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6. Compiled and Edited the Annual Report of CMER&TI, CSB for the year 2006-07.
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Engagement in other activities:

- Successful implementation of ISO 9001 : 2008 International Standards in the institute and its up-gradation to ISO 9001 : 2015 International Standards.
- Successful implementation of ISO 9001 : 2008 International Standards at RMRS, Boko.
- Development of FFS and Sericulture Resource Centre at Dhakuakhana, Lakhimpur, Assam.
- A Database website WWW.mugadbase.com has been developed.

Contribution to Organizational Improvement

- A. The Biotechnology & Molecular Biology and Tissue Culture laboratory of the Institute was developed and strengthened with modern equipments, viz. HPLC system, PCR / Thermal Cycler, Gel documentation system, normal and cooling ultra centrifuges, orbital shaking incubator, gel electrophoresis systems (both horizontal and vertical types) with power supply units, electronic balance, double-beam UV Vis Spectrophotometer (PC based), pH meter, shakers, Laminar Air Flow machine, lyophilizer, Air Purifier, deep freeze (-20 and -80 degree C), autoclave, hot air oven etc. The fund for equipping the laboratory was obtained from CSB as well as from outside agencies like DBT and DST through implementation of research projects.
- B. Initiatives taken by me led to installation of water filtration units at Quarter Complex, Farm No. 1 cum Training Hostel, Farm No. 3 cum main office building of the CMER&TI.
- C. Creation of irrigation facilities at Farm No. 1 of CMER&TI.
- D. Development of 3 new Som plots (more than 1500 plants) at Farm No. 1 & 2 and improvement of old plots by following package of practices like pruning / pollarding / fertilizer and vermicompost application and other crop protection measures.
- E. Development of fruit orchard in the Quarter Complex of CMER&TI at Cinnamara, Jorhat.

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