Dr. Yumnam Debaraj
Scientist-D
Regional Sericultural Rsearch Station,
Central Silk Board, Ministry of Textiles : Govt.of India
Imphal-795002, Manipur, e-mail: yumdebnamraj@gmail.com
Mobile : 9436034737

Academic Qualification (Post graduation onwards) :

#	Degree	Year	Subject/ Topic of thesis	University
a)	**M. Sc.**	1988	Life Science (Zoology) **Specialization in Enomology**	Manipur University
b)	**Ph. D.**	1994	"Studies on Bio-ecology and control of the cabbage aphid, *Brevicoryne brassicae* (L.) (Homoptera :Aphididae) in Manipur".	Manipur University

Area of Research Interest : Insect bio-ecology, insect pest management, silkworm seed production and rearing, extension management, etc.

Work experience (in Chronological order) :

Organization/ Institute	Designation/ Capacity	Duration	Period		Subject / area
			From	To	
Regional Tasar Research Station, CSB, Imphal	SRA	9 yrs	1990	1999	Oak tasar Silkworm seed production and rearing
Regional Eri Research Station, CSB, Mendipathar	SRO	4 yrs	1999	2003	Eri silkworm crop improvement
Research Extension Centre, CSB, Imphal	SRO/ Scientist -C	6 yrs	2003	2009	Mulberry silkworm rearing and extension
Regional Sericultural Research Station, CSB, Jorhat	Scientist -C/ D	7 yrs	2009	2016	Mulberry silkworm crop improvement and pest management
Regional Sericultural Research Station, CSB, Imphal	Scientist -D	5 yrs	2016	Till date	Oak tasar, eri, muga and mulberry crop improvement

Projects handled :

Title of the Project	Investiga-torship & Period	Period of associa-tion	Significant Achievement
1. Preservation of oak tasar silkworm eggs for synchronized hatching.	C.I. 1993-96	2 years	The suitable age of eggs, temp. & duration for refrigeration in order to delay hatching was worked out.

2. Breeding for improve-ment of eri silkworm.	P.I. 1997-2000	7 months	Evolved two elite crosses, YZ x GBS (ES1) and GBS x GBZ (ES2).
3. Integrated plantation system of castor and kesseru for ericulture.	C.I. 2000-01	1 year	The result showed no substantial gain as cost benefit ratio of both the plantation (integrated & monocrop) is same.
4. Improvement of eri host plant leaf yield and quality.	C.I. 2000-02	2 years	Local red (non-bloomy) variety of castor planted at 1.0 x 1.0 m spacing and pruned at 1.0 m height during March showed highest leaf yield.
5. Standardization of eri silkworm seed production techniques.	P.I. 2000-02	2 years	The realized fecundity, co-efficient of egg laying, eggs/gm and wt. of avg. dfl/ moth were worked out. The nylon net bag has more advantages & suitable for oviposition.
6. Improvement of eri silkworm crop production.	P.I. 2000-03	3 years	Platform rearing technique was developed as an improved method for eri silkworm rearing. Two bamboo strip mountages (single layered & multiple layered) were also developed.
7. Development of Weather based forecasting models for mulberry Pests [PRE-3345]	C.I. 2005-15	2.5 year	Developed weather based forecasting models of pest of mulberry for Jorhat region.
8. Studies on biology and feeding efficiency of the coccinellid predator, *Scymnus* sp. for management of whitefly on mulberry [B-JRH(P)-011]	P.I. 2011-13	2 years	Biology and feeding efficacy of coccinellid predator was studied for management of whitefly on mulberry.
9. Evaluation of elite bivoltine silkworm germplasm under different agro climatic conditions : All India Silkworm Germplasm Evaluation Program Phase-II [AIE-3454]	C.I. 2011-14	3 years	Elite bivoltine silkworm germplasm was evaluated for Jorhat region and recommended.
10. Bio-ecology, economic injury level and management of major insect pests infesting oak ecosystems [ARE-4726]	C.I. 2018-20	3 years	Economic Injury level of two major pests was determined. Effective biopesticide was evaluated. Management of uzi fly through IPM was worked out. New PET bottle uzi trap was developed.
11. Evaluation of Eri Silkworm Races suitable for different agro-climatic conditions of Manipur [APR: 05010SI]	P.I. 2019-22	3 years	Project under progress.
12. Isolation of thermo-tolerant line (s) of Oak tasar silkworm *Antheraea proylei* J.[AIB: 05009SI]	P.I. 2019-22	3 years	Project under progress.
13. AICEM Phase IV Trial (All India Coordinated Experiments for Mulberry)	P.I. 2019-25	6 years	Project under progress.
14. Studies on population diversity and role of host plant volatile cues for enhancing egg laying in temperate tasar silk moth, *Antheraea proylei* J.	C.I. 2021-24	3 years	Project just initiated

Technology developed :

1) Platform rearing technique of eri silkworm

2) Bamboo strip mountage of eri silkworm

Professional Recognition/Award/ Prize/ Fellowship : Nil

Training undergone: Thirteen training programmes on different aspects were attended organized by different organizations like RSIC, NEHU, Shillong; CES, IISc.; Bangalore; SSTL, Kodathi; DOS, Manipur; CSR&TI, Mysore; CSR&TI, Berhampore; NSSO, Bangalore; NESAC, Shillong; CMER&TI, Jorhat; MSSO, Guwahati and CSB, Bangalore during last 29 years.

Publications (numbers only):

Book Chapters: 4 nos.
Research Papers, Reports: 55 nos.
General articles: 5 nos.
Conference papers:8 nos.

Publication (Selected) :

i) Research paper -

a) **Debaraj, Y.** & Singh, T.K. (1990) Biology of an aphidophagous coccinellid predator, *Coccinella tranversalis* Fab. *J. Biol. Control*, **4** (2): 93-95.

b) **Debaraj, Y.**, Chalapathi, M.V., Sinha, R.K. & Noamani, M.K.R. (1994) Ovipositional behaviour and relationship between body weight and fecundity in *Antheraea proylei* J. (Sat.: Lep.). *J. Seric*., **2** (1&2): 33-42.

c) **Debaraj, Y.** & Singh, T.K. (2000) Morphometric studies of different stages of cabbage aphid, *Brevicoryne brassicae* (L.) *Russian Entomological Journal*, **9** (4): 315-319.

d) **Debaraj, Y.**, Datta, R.N., Das, P.K. & Benchamin, K.V. (2002) Eri silkworm crop improvement – A review. *Indian J. Seric*., **41** (2): 100-105.

e) **Debaraj, Y.**, Sarmah, M.C. & Suryanarayana,N. (2003) Seed technology in eri silkmoth - Experimenting with other oviposition devices. *Indian J. Seric*., **42** (2): 118-121.

f) **Debaraj, Y.** & Singh, T.K. (2004) Population dynamics of cabbage aphid, *Brevicoryne brassicae* (Linn.) in relation to abiotic and biotic factors at different altitudes of Manipur. *Indian Journal of Entomology*, **66** (2): 172-175.

g) **Debaraj, Y.**, Singh, R. & Bajpai, A.K. (2010) Evaluation of some mulberry varieties for yield and quality through bioassay in Manipur, North East India. *Uttar Pradesh J. Zool.* **30** (2): 165-168.

h) **Debaraj, Y**., Singh, N.I., Singh, L.S. & Ravindra Singh (2011) Studies on hybrid vigour in different crosses of the eri silkworm, *Samia ricini* Donovan and identification of superior hybrids. *Sericologia*, **51** (2): 237-244.

i) L. Somen Singh, **Y. Debaraj**, N. Ibotombi Singh, B. C. Ray & Ravindra Singh (2012) Studies on the Combining ability analysis of six inbred lines of eri silkworm, *Samia ricini* Donovan. *Indian J. Sericulture*, **51** (2): 167-172.

j) **Debaraj**, **Y.**, Ravindra Singh, T.K. Biswas & B.B. Bindroo (2013) A review on eri culture with special reference to rearing and seed technologies. *Sericologia*, **53** (1): 1-9.

k) S. Subharani, **Y. Debaraj**, L. Bidyapati and A. K. Sinha (2017) Rearing performances of Indian temperate tasar silkworm, *Antheraea proylei* Jolly fed on *Quercus serrata* (Carruther), *Quercus griffithii* (Hook & Thomson) and *Lithocarpus dealbata* (Hook & Thomson) during autumn crop. *Mun. Ent. Zool.* **12** (2) : 612-617.

l) Ritwika Sur Chaudhuri, **Y. Debaraj** and N. Ibotombi Singh (2018) Impact assessment of front line demonstration of technologies on oak tasar cocoon yield and economics. *Sericologia*, **58** (2) : 132-139.

m) S. Subharani, **Y. Debaraj**, Ritwika Sur Chaudhuri and N. Ibotombi Singh (2019) Biology and morphometrics of *Phalera raya* Moore (Lepidoptera: Notodontidae) infesting *Quercus serrata* Thunb. *Mun. Ent. Zool.* **14** (2) : 643-647.

n) Ritwika Sur Chaudhuri, **Y. Debaraj**, S. Subharani Devi and N. Ibotombi Singh (2019) Evaluation of oak tasar silkworm hybrids in different seasons for improvement in productivity. *Mun. Ent. Zool.* **14** (2) : 629-633.

o) S. Subharani Devi, O. Priyadarshini and **Y. Debaraj** (2020) Biology of semilooper, *Hyblaea puera* Cramer, an important pest of *Quercus serrata* Thunb. *Ann. Pl. Protec. Sci*., **28** (2) : 123-126.

ii) Book Chapter -

#	Author's Name	Name of the Book and Chapter Title	Publisher/ Editor	Year of publication and pages
1.	Singh, T.K. and **Debaraj, Y.**	"*Potential IPM Tactics*" – (Some common Biocontrol Agents of Aphids)	Westvill Publishing House, New Delhi – 63 (Editor- Prasad, D. and Gautam, R. D., IARI, New Delhi)	1998 pp. 387-404
2.	**Debaraj, Y.** and Singh, B.K.	"*Principles of Ericulture*" - (Eri silkworm rearing management)	Suryanarayana, N. & Singh, K.C., CTR&TI, Central Silk Board, Ranchi	2005 pp. 55-64
3	**Debaraj, Y.** and Singh, T.K.	*"Endemic Bioresources* of *India – Conservation and sustainable development"* – (Predatory insects of aphids infesting cruciferous crops in Manipur)	Bishen Singh Mahendra Pal Singh, Dehra Dun (Editor- Prof. Singh, N.I., Dept. of Life Sciences, Manipur University)	2007 pp. 239-258

4.	**Debaraj, Y.** and Singh, T.K.	"*Insect and Disease Control : A sustainable Approach*"- (Bioecological studies of cabbage aphid, *Brevicoryne brassicae* (L.) and its natural enemies and their possible use in IPM strategy)	Daya Publishing House, Delhi-35 (Editor- Prasad, D. IARI, New Delhi)	2011

Membership of professional societies :

a) The Aphidological Society, India, GU, Gorakhpur

b) The Entomological Society of India, IARI, New Delhi

c) The Society of plant protection Sciences, IARI, New Delhi

d) The National Academy of Sericultural Sciences, India, CSTRI, Bangalore.

e) The Uttar Pradesh Zoological Society, Muzaffarnagar

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