

Department of Entomology

ANNUAL REPORT

2018-19



Faculty of Agriculture

UTTAR BANGA KRISHI VISWAVIDYALAYA

PUNDIBARI, COOCH BEHAR-736165

West Bengal, India

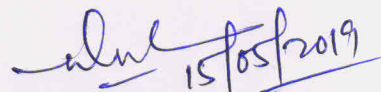
From the desk of Head of the Department

Department of Agricultural Entomology has prepared its Annual Report for the year 2018-19. The report is the exact reflection of the year round activities of the Department involved in different activities; i.e. in the area of academic, research and extension. The respected as well as the knowledgeable and experienced faculties of the Department shouldered their responsibilities throughout the year. They guided the students in both UG and PG levels. They not only illuminated them to gain knowledge through theoretical classes, but they unearthed the treasures before them that are hidden in laboratory studies as well as in field level practical classes. The students are distinct in different activities, both in academic and research, and are excellent competitors in different examinations like JRF, NET, SRF etc. During 2018-19, two of our Ph.D. students were selected for National Scholarship under the category of National Fellowship for ST Students. Two students were successful achieving jobs in private Universities like Neotia University, Kolkata (West Bengal) and Centurian University (Odisha). Another student bagged the job in KVK, Jhargram (West Bengal). The effort, hard work, dedication of the students and the help and guidance from the teachers as pathfinders built up the basement of the success that made us very proud. A Voluntary Centre on AICRP on Biological Control of Crop Pests, established in the year 2016-17, has been upgraded to Contingency Centre as approved from NBAIR, Bengaluru.

Farmers are one of the pillars of Agriculture. All the teachers have always raised their helping hand in the form of advisory to the farmers who attended the Department for any query. Non-teaching staffs have also expressed their co-operative attitude in every aspect. All of them provided necessary information during preparation of the report.

I am very much thankful to all of them for the whole-hearted co-operation and co-ordination. I congratulate the entire Department for preparing the Annual Report 2018-19 so successfully.

Date: 15.05.2019
Place: Pundibari


(Prof. N. Laskar)

CONTENTS		
Sl. No.	Topic	Page No.
	Executive Summary of the Department	1
1.1	Introduction	1
1.2	Objectives	1
2.	Teaching	1-3
2.1	Post Graduate Requirement	2
2.2	PG Student completed degree	2
2.3	Existing M.Sc. students	3
2.4	Existing Ph.D. students	3
3.	Research	4-6
3.1	Area of research	4
3.2	Scholarships, Stipends and fellowship	4
3.3	Details of Agencies/ Organisation where student got Placement	5
3.4	Involvement of teachers in various research projects	5-6
4.	Extension Activities	7-8
4.1	Training for farmers/ Rural youth/extension functionaries	7
4.2	Booklet/ Leaflet / Newsletter etc. developed or published	7
4.3	Visit to the establishment (laboratory/research field etc.) by farmers/ students etc.	8
5.	Infrastructural Facilities	8
6.	Faculty And Staff Position	9
7.	Publication	10-11
(i)-(v)	Book, Book chapter, Bulletin, Abstract, Popular article	11
8.	Symposium/ Trainings/ Seminars/Workshops Attended or Organised	11-12
9.	Member Of Academic Societies	12
10.	Other Activities and Achievements	12
11.	Curriculum Development & Delivery	12
12.	Linkages With ICAR Institutes For Academic Research	13
13.	Photographs	14-15
	Extension Related	14
	Survey Related	15

Executive summary of the Department of Agril. Entomology (2018-19)

1.1 INTRODUCTION:

This department started as a constituent under the erstwhile North Bengal Campus of Bidhan Chandra Krishi Viswavidyalaya (BCKV) since 1979 at Gram Sevak Training Centre at Cooch Behar, West Bengal and only the undergraduate courses were catered till 1998. After that M.Sc. (Ag.) programme with an intake capacity of five (05) students was introduced from 1999.

The full-fledged Department of Agricultural Entomology started functioning with the establishment of Uttar Banga Krishi Viswavidyalaya in February, 2001. Since the establishment of the university in 2001 both the undergraduate and post graduate courses (M.Sc. and Ph.D.) have been introduced.

1.2 Objectives

- a) Conducting instructional programme to the Under Graduate, post-Graduate and Ph.D. students through theory and practical trainings to develop and supply best human resources in the field of agriculture and allied sciences to compete in job market.
- b) To carry out and supervise fundamental, academic and applied researches for the development of science for ultimate benefit to the farming community with keen attention towards restoration of health, environment and right to get residue free food stuff.
- c) Imparting training and visit to the farmers field with the students for the benefit of teachers and students to perceive the current on-farm problems and also to provide advisory with most modern technologies for mitigation.
- d) Restoring democratic environment and to maintain corporate life in integrity among the members of the Department for better teaching-learning processes.
- e) To maintain sustained effort towards improving teaching methodology befitting course-curriculum for imparting best knowledge to the students.

2. Teaching

The Department has catered different courses for Under Graduate Agriculture and Horticulture students as per Vth Dean Committee recommendation were ENT-151, ENT-152, ENT-201, ENT- 251, ENT- 301, ENT-351, ENT-352 and ENT- 353 during 2018-19.

2.1 Post Graduate Requirement:

The courses offered to the PG students were –

M.Sc.: ENT- 501, ENT-502, ENT-503, ENT-504, ENT-506, ENT-507, ENT-509, ENT-510, ENT-511 and ENT-512.

Ph.D.: ENT-601, ENT-602, ENT-603, ENT-605, ENT-606, ENT-607 and ENT-608.

2.2 PG Student completed degree:

i) M.Sc. (Ag)

Sl. No.	Name of the Student	Gender	Home State	Supervisor	Title of thesis
1.	Ajit Kumar Sahu	Male	Odisha	Mr. P. Sarkar	Field screening of different brinjal genotypes against root knot nematode under Terai agro-ecological condition of West Bengal.
2.	Arpita Baidya	Female	Tripura	Ms. M. Chatterjee	A study on the occurrence of important insect pests in mulberry and their management under Terai region of West Bengal.
3.	B.K. Sreedhar	Male	Andhra Pradesh	Prof. T. K. Hath	Screening of insect pests (Aphid) of mustard under Terai region of West Bengal.
4.	N. Ponnusamy	Male	Andhra Pradesh	Prof. S. Pal	Taxonomical and biological studies on predaceous coccinellid beetles associated with various crop ecosystems.

ii) Ph. D.

Sl. No.	Name of the Student	Gender	Home State	Supervisor	Title of thesis
1.	Bikash Subba	Male	Sikkim	Prof. S. K. Senapati	Formulation of seasonal crop pest module of Okra <i>Abelmoschus esculentus</i> L. for Terai agro-climatic condition of West Bengal.
2.	Roshna Gazmer	Female	Sikkim	Prof. N. Laskar	Impact of physico-chemical parameters of pumpkin, <i>Cucurbita moschata</i> Duch. Ex. Poir, on the incidence of melon fly, <i>Bactrocera cucurbitae</i> (Tephritidae: Diptera)

2.3 Existing M.Sc. students along with the name of supervisor

Sl. No.	Name of the Student	Gender	Home State	Supervisor	Title of thesis
1.	Riju Nath	Male	West Bengal	Prof. N. Laskar	Impact of environment and floral factors on the activities of <i>Apis mellifera</i> Linn.
2.	Tumma Mounika	Female	Andhra Pradesh	Dr. S. K. Sahoo	Species diversity of <i>Callosobruchus</i> spp. and their management with some botanicals in Terai agro ecology of West Bengal.

2.4 Existing Ph.D. students along with the name of supervisor

Sl. No.	Name of Students	Gender	Home State	Name of The Supervisor	Title of thesis
1.	Sibananda Singha	Male	West Bengal	Prof. N. Laskar	Biotic stress of honey bees (<i>Apis mellifera</i> L.) vis-à-vis eco-friendly management under Terai region of West Bengal.
2.	Moulita Chatterjee	Female	West Bengal	Prof. J. Ghosh	Status of rice leaf folder (<i>Cnaphalocrocis medinalis</i> G.) and their ecological management under Terai region of West Bengal.
3.	Suraj Sarkar	Male	West Bengal	Dr. S. Pal	Biointensive pest management in Brinjal through farmscaping and biorationals.
4.	Choyang Sherpa	Male	West Bengal	Prof. N. Laskar	Species diversity and bio-ecological study of mealy bugs (Pseudococcidae: Hemiptera; Insecta) under northern tract of West Bengal.
5.	Shriti Moses	Female	Bihar	Prof. J. Ghosh	Diversity and conservation of predatory spiders in rice ecosystem in Terai region of West Bengal

3. RESEARCH

3.1 Area of research:

The Department of Agril. Entomology has directed research activity on various aspects in the following way –

- * Crop-pest based research
- * Fundamental research like species identification, morphological studies, taxonomical studies including application of molecular approaches.
- * Formulation of IPM modules for different crop and pests
- * Mass production, release and maintenance of biological agents
- * Productive insect based research like honey bee, silkworm etc.
- * Management of nematodes and mites pests of different crops

3.2 Scholarships, Stipends and fellowship:

Sl. No.	Faculty	Name of the Scholarship	Number of the students	Total amount (Rs.)/ Semester
1.	Agriculture	University Merit Scholarship	02	7,200/-
2.	-Do-	National Fellowship for ST Students	02	66,800/-

M.Sc. students

Sl. No.	Name of the students	Name of the Scholarship	Amount/semester (Rs.)
1.	Riju Nath	University Merit Scholarship	3,600/-
2.	Tumma Mounika	-Do-	3,600/-

Ph.D. students

Sl. No.	Name of the students	Name of the Scholarship	Amount/month* (Rs.)
1.	Choyang Sherpa	National Fellowship for ST Students	33,400/-
2.	Smriti Moses	-Do-	33,400/-

* including Rs. 2,240/- per month as HRA

3.3 Details of Agencies/ Organisation where student got Placement during the year:

Sl. No.	Name of Students	Name of Organisation	Address	Govt./Private	Others
1.	Sagar Tamang	KVK	KVK, Jhargram, West Bengal	Central Govt.	
2.	Roshna Gazmer	Neotia University	Neotia University, Kolkata	Private	
3.	Ajit Kumar Sahu	Centurian University	Centurian University, Bhubaneshwar	-Do-	

3.4 Involvement of teachers in various research projects:

Sl. No	Name of the projects/ scheme	Name of the P.I/ Co-P.I.	Year of commencement	Funding Agency	Total Budget (Rs.)
1	Evaluation of bio-efficacy of abamectin 1.9% EC against red mite, <i>Tetranychus</i> spp. and.... of tomato	Prof. N. Laskar (PI)	2017	Crystal Crop Protection Ltd.	2.99 lakh
2	Evaluation of Bio-efficacy of coded insecticide CCP-4620 against <i>mites of tea</i>	D. Chakraborty (PI)	2017	Crystal Crop Protection Ltd.	4.16 lakh
3	Evaluation of coded pesticides against <i>Helicoverpa</i> , <i>Spodoptera</i> and Semilooper in Soybean.	Dr. S. K. Sahoo (PI)	2018	Crystal India Pvt. Ltd.	4.00 lakh
4	Bio-efficacy & Phytotoxicity evaluation of Acephate 75% SP against sucking pests of cotton.	Dr. S. K. Sahoo (PI)	2018	Swal Corporation Ltd.	5.04 lakh
5	Bio-efficacy, phytotoxicity and effect on natural enemies of some new generation insecticide molecules on different crops	Prof. J. Ghosh (PI)	2018	Willowood Chemicals Pvt.Ltd.	8.55 lakh
6	Bio-efficacy, phytotoxicity & residue in Fipronil 4%+Acetamiprid 4%SC against pests of Okra & Tomato.	Prof. J. Ghosh (PI)	2018	Parijat Industries Pvt. Ltd.	3.25 lakh

7	Bio-efficacy & phytotoxicity of Phoskill (Monocrotophos 36 SL) on okra, chilli, brinjal & onion.	Prof. N. Laskar (PI)	2018	UPL Ltd.	10.08 lakh
8	Bio-efficacy, phytotoxicity and effect on natural enemies of some insecticide molecules on field crops	Prof. N. Laskar (PI)	2018	UPL Ltd.	33.60 lakh
9	Beekeeping for upliftment of rural livelihood in North Bengal.	Prof. N. Laskar (PI)	2018	NABARD	5.08 lakh
10	AICRP-Biological control of crop pests	Dr. S. K. Sahoo (PI)	2018	ICAR-NBAIR	Contingency Centre
11	Bio-efficacy of coded insecticides IKI3106 80SL against stem borer and leaf folder of Rice.	Dr. S. K. Sahoo (PI)	2019	ISK Biosciences India Pvt. Ltd.	3.99 lakh
12	To evaluate bio-efficacy of Ulala (Flonicamid 50% WP) against insect pests of Potato	Prof. N. Laskar (PI)	2019	UPL Ltd.	3.36 lakh
13	Evaluation of Bio-efficacy and Phytotoxicity of Thiodicarb 50% + Imidacloprid 5% WDG against major insect pests of Chill	D. Chakraborty (PI)	2019	M/s Agro Life Science Corporation	3.36 lakh

4. Extension Activities

4.1 Training for farmers/ Rural youth/extension functionaries

Sl. No	Topic of training	Date & Duration	Held at	Funding/ conducting agency
1.	Demonstration cum training programme on bee keeping for upliftment of rural livelihood in terai region.	16.09.2018, 03.10.2018, 06.10.2018, 12.10.2018	Cooch Behar-I, Alipurduar-I, Tufangunj	Department of Agril. Entomology Funded by NABARD
2.	Farmers Training cum Awareness programme on “Biological Control of Crop Pests”.	20.12.2018	Gumanihat Krishak Mandi, Mathabhanga-II	AICRP- Biocontrol Unit Department of Agril. Entomology
3.	-Do-	05.01.2019	ADA Office, Mathabhanga-I	-Do-
4.	Skill Development training on bee keeping	03.01.2019 to 27.01.2019	Department of Entomology	Department of Agril. Entomology, Funded by ICAR-ATARI
5.	Training cum input distribution on “Biological Control of Crop Pests”.	06.03.2019	Uttar Chakoakheti, Alipurduar	-Do-
6.	Training cum Awareness programme on “Biological Control of Crop Pests”.	13.03.2019	Dakshin Santali, Kalchini, Alipurduar	-Do-
7.	Training cum Awareness programme on “Biological Control of Crop Pests”.	20.03.2019	Department of Entomology	-Do-
8.	Training cum Awareness programme on “Biological Control of Crop Pests”.	26.03.2019	Dakshin Santali, Kalchini, Alipurduar	-Do-

4.2 Booklet/ Leaflet / Newsletter etc. developed or published

Sl. No.	Title	Name of Resource person(s)/ Author (s)	Type of Activity	Language
1.	Susanghata Sasyasurakshya O Kitnasaker Byabohar Bidhi	Prof. N. Laskar, Prof. J. Ghosh, Dr. S. K. Sahoo, M. Chatterjee & D. Chakraborty	Folder	Bengali
2.	Bee Keeping	Prof. N. Laskar	Radio Talk	-Do-
3.	Joibik Upaye Fasaler Kitshatru Niyantaran	Dr. S. K. Sahoo, M. Chatterjee & D. Chakraborty	Leaflet	-Do-
4.	Joibik Upaye Foler Maachhi Niyantaran	Dr. S. K. Sahoo, M. Chatterjee & D. Chakraborty	Leaflet	-Do-
5.	MADHU	Prof. N. Laskar, Prof. J. Ghosh & Dr. S. K. Sahoo	Leaflet	-Do-

4.3 Visit to the establishment (laboratory/research field etc.) by farmers/ students etc.

Sl. No.	Name of School/University/Famers' Club	Purpose of visit	Date of visit	No. of visitors
1.	Farmer's visit under ASCI programme	Nursery Management	11.03.2018	M-17, F-03
2.	Brishaketu Dharmeswari Girls' High School, Ghoksadanga, Cooch Behar	Exposure visit	24.05.2018	F-15
3.	PRT visit	---	05.12.2018	-----

* 'M' – Male and 'F' – Female

5. INFRASTRUCTURAL FACILITIES

Sl. No.	Infrastructure	Number	Facilities Available
a)	Seminar Hall cum classroom	01	AC, Internet Connectivity and LED Monitor for display/presentation
b)	Molecular Entomology Laboratory	01	Thermal Cycler PCR, Gel Electrophoresis, Deep Freezer, Transiluminator, Digital Hot Water Bath and Micro Centrifuge
c)	Insect Taxonomy and Morphology Laboratory	01	Stereo Zoom Microscopes (Binocular/Trinocular: 07) with imaging facility, Hot Air Oven, BOD
d)	Biological Control Laboratory	01	Laminar Air Flow and Autoclave
e)	Acarology Laboratory (under progress)	01	– N.A. –
f)	UG Laboratory	01	Simple and Compound Microscopes (30 each)
g)	Insect Museum	01	Collection of insects belonging to different orders featuring an aesthetic appeal
h)	PG Laboratory	01	Laminar Air Flow, Hot Air Oven and other Instruments and Equipments related to PG Research

6. FACULTY AND STAFF POSITION

6.1 Faculty

Sl. No.	Name	Designation	Specialisation	Contact details
1.	Dr. Jaydeb Ghosh	Professor	Economic Entomology and Acarology	Ph.No.9434483767 Email: jaydebubkv@yahoo.com
2.	Dr. T.K. Hath	Professor	Economic Entomology	Ph.No.9434685670 Email: tapanhath@gmail.com
3.	Prof. N. Laskar	Professor	Economic Entomology	Ph. No. 9434483855 Email: nripendralaskar@yahoo.co.in
4.	Dr. S.K. Sahoo	Associate Professor	Economic Entomology	Ph.No.9647255868 Email: shyamalsahoo@gmail.com
5	M. Chatterjee	Assistant Professor	Economic Entomology	Ph.No.9679350517 Email: moulita.2014@gmail.com
6.	D. Chakraborty	Assistant Professor	Economic Entomology	Ph.No.9647800589 Email: debanjan.ubkv@gmail.com

6.2 Staff

Sl. No.	Name	Designation	Specialisation	Contact details
1.	Dr. T. K. Ghosal	Superintendent (Tech.)	Associated in practical classes	Ph.No.9474521381 Email: drtkghosal@gmail.com
2	Sri Subrata Dhar	Lab Attendant	Maintenance of files, lab attendant, letter distribution	Ph. No. 6297793652 / 9851749595

7. PUBLICATION

Sl. No.	Title	Author (s)	Journals with NAAS/other rating
1.	Investigation on insect dynamics in Indian mustard at different sowing dates.	Sahoo, S. K.	<i>Journal of Entomological Research</i> , 42 (3):343-347. NAAS rating 5.05 (ISSN:0378-9519)
2.	Preparation of herbal extracts & evaluation of their efficacy against rice weevil (<i>Sitophilus oryzae</i> L.) Curculionidae: Coleoptera	Sahoo, S. K.	<i>Journal of Entomological & Zoological Studies</i> , 6 (5): 2236-2240. NAAS rating 5.53 (ISSN:2349-6800)
3.	Biological & seasonal incidence of Mexican beetle, <i>Zygogramma bicolorata</i> Pallister on perthenium in New alluvial zone of West Bengal.	Sahoo, S. K.	<i>Indian journal of Entomology</i> , 80 (3):1183-1185. NAAS rating 5.89 (ISSN:0367-8288)
4.	Monitoring of a late mustard aphid (<i>Lipaphis erysimi</i> Kalt.) by using yellow sticky trap in West Bengal.	Sahoo, S. K.	<i>Journal of Crop & Weed</i> , 14 (3):149-152. NAAS rating 5.28 (ISSN: 0974-6315)
5.	Screening of different pulses against pulse beetle, <i>Callosobruchus chinensis</i> L. (Bruchidae; Coleoptera).	Sahoo, S. K.	<i>Journal of Agriculture & Technology</i> , 5 (1): 24-27. NAAS rating 3.39 (ISSN: 2348-4721)
6.	Diversity of insect and acarine fauna associated with marigold in northern and eastern parts of India.	Chatterjee, M.	<i>Pest Management in Horticultural Ecosystem</i> 24 (1): 73-77. NAAS rating 4.49 (ISSN: 0971-6831)
7.	Performance evaluation and dose standardization of a new acaricide, Pyridaben 20% WP against red spider mite, <i>Oligonychus coffeae</i> Nietner infesting tea under terai region of West Bengal.	Chatterjee, M.	<i>Journal of Crop & Weed</i> , 14 (1):195-200. NAAS rating 5.28 (ISSN: 0974-6315)
8.	Efficacy of ready mix formulation of Spirotetramat 120 + Imidacloprid 120:240 SC against sucking pest complex of Brinjal.	Patra, B., Chatterjee, M. , Alam, S. K. F. and Samanta, A.	<i>Indian journal of Entomology</i> , 80 (3): 825-833. NAAS rating 5.28 (ISSN: 0367-8288)
9.	Potentiality of some inert materials as grain protectant against rice weevil, <i>Sitophilus oryzae</i> L. on stored wheat grains.	Kundu, B., Okram, S., Hath, T.K. and Chakraborty, D.	<i>Journal of Entomological & Zoological Studies</i> , 6 (3):1271-1274. NAAS rating 5.53 (ISSN: 2349-6800)
10.	Biology of <i>Sitophilus oryzae</i> L. (Coleoptera: Curculionidae) on four different germplasm of stored wheat grains.	Kundu, B., Okram, S., Hath, T.K. and Chakraborty, D.	<i>International Journal of Curr. Microbiological App. Science</i> , 7 (6): 2401-2406. NAAS rating 5.38 (ISSN: 2319-7692)

11.	Estimation of optimum time of insecticidal spraying for controlling Gundhi bug infestation on Boro rice in terai region of West Bengal.	Krishnamurthy, P. P, Vaibhav, K. N., Chittora, V., Kumar, P., Mohapatra, U. and Laskar, N.	<i>International Journal of Chem. Studies</i> , 6(5): 1185-1188, NASS rating 5.31 (ISSN: 2349-8528)
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i. **Book:** NIL

ii. **Book Chapter:** NIL

iii. **Bulletin:** NIL

iv. **Abstract:** NIL

v. **Popular Article:** NIL

8. SYMPOSIUM/ TRAININGS/ SEMINARS/WORKSHOPS ATTENDED OR ORGANISED:

Sl. No.	Topic of seminar (Attended by)	Venue and date	Duration	National/ International	Funding Agency/Organiser (ICAR/Other)
1.	27 th Annual Group Meeting of AICRP-Biological Control (Dr. S. K. Sahoo)	KAU, Thrissur, (Kerala) 17 th -18 th May, 2018	2 days	National	ICAR-NBAIR
2.	International Conference on Agriculture & Allied Sciences: The productivity, Food Security & Ecology. (D. Chakraborty)	BCKV, Kalyani 13 th -14 th Aug., 2018	2 days	International	Deptt. of Agril. Extension, BCKV and 'Krishi Sanskriti'
3.	Farming diversity for doubling farmers income (Prof. J. Ghosh, Dr. S. K. Sahoo, M. Chatterjee and D. Chakraborty)	Pundibari, UBKV, 18 th Sep. 2018	1 day	National	COBACAS, Cooch Behar, West Bengal
4.	Workshop of BSMA Committee (PG) (Prof. N. Laskar)	Anand Agricultural University, 17 th -18 th Dec. 2018	1 day	National	ICAR
5.	106 th Indian Science Congress Association (Prof. J. Ghosh)	Lovely Professional University, Punjab, Jan. 3 rd – 7 th 2019	5 days	National	St. Joseph College, Bengaluru
6.	4 th Annual Women's Meet: AWM 2019 (M. Chatterjee)	Chennai, 2 nd March, 2019	1 day	National	Centre for Advanced Research & Design of Venus International Foundation, Chennai

7.	National Seminar on Use of Agro-chemicals for A Sustainable Agriculture and Environment (M. Chatterjee)	BCKV, Kalyani, 27 th March, 2019	1 day	National	Society for Fertilizers & Environment in collaboration with BCKV
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9. MEMBER OF ACADEMIC SOCIETIES

Sl. No.	Name of the Faculty	Name of the Academic Society
1.	Prof. J. Ghosh	COBACAS Society of Biological Control Advancement
2.	Prof. T. K. Hath	COBACAS
3.	Prof. N. Laskar	Society of Biological Control Advancement
4.	Dr. S. K. Sahoo	COBACAS Entomological Society of India Society of Biological Control Advancement
5.	M. Chatterjee	COBACAS Crop and Weed Science Society
6.	D. Chakraborty	COBACAS

10. OTHER ACTIVITIES AND ACHIEVEMENTS

(Co-curricular, Extension and Professional Development related Activities)

Sl. No.	Name of the Faculty	Title	Venue & Date	Duration	National/ International	Funding Agency (ICAR/ Others)
1.	Dr. S. K. Sahoo	Training on Molecular Identification and DNA Barcoding of Insect Pests and Natural Enemies including Invasive species	ICAR, 18-27 th November, 2019.	10 days	ICAR

11. CURRICULUM DEVELOPMENT & DELIVERY:

Study material and PPT on different entomological courses under UG and PG. Development of Practical manual of different UG courses.

12. LINKAGES WITH ICAR INSTITUTES FOR ACADEMIC RESEARCH IF ANY:

Sl. No.	Purpose	Institute	No. of Teachers/ Academic Staff
1.	Question setter	CAU, Barapani	Prof. T. K. Hath
		(i) Visva –Bharati University (ii) BCKV, Mohanpur, Nadia	Prof. J. Ghosh
2.	Thesis evaluator	(i) BCKV, Mohanpur, Nadia (ii) OUAT, Bhubaneswar, Orissa	Prof. T. K. Hath
		University of Gourbanga, Malda	Prof. J. Ghosh
3.	External expert	BCKV, Mohanpur, Nadia	Prof. T. K. Hath

13. DETAIL OF STATE / NATIONAL / INTERNATIONAL AWARD/BEST TEACHER/THESIS/ANY NATIONAL AWARD/RECOGNITIONS:

Sl. No.	Name of the collage /Faculty	Name of Award	Conferring Agency	Awardees' Name	Conferred for
- NIL-					

Photographs

Extension related



Training-cum-input Distribution
(13.03.2019 at Kalchini, Alipurduar)



Training programme on awareness of Fall Armyworm
(08.02.2019 at Kanfata, Mathabhanga-I)

Survey related



Pointed gourd field infested by fruit fly
(16.07.2018 at Barasimulguri, Mathabhanga-II)



Rice field infested by Rice Mealy Bug
(05.10.2018 at Dhangdhinguri, Coochbehar-II)