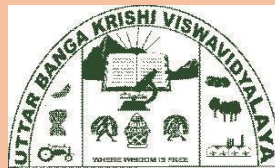


ANNUAL REPORT (2022-23)

Department of Entomology



Faculty of Agriculture
UTTAR BANGA KRISHI VISWAVIDYALAYA
PUNDIBARI, COOCHBEHAR – 736165
West Bengal, India

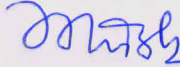
From the desk of Head of the Department

Department of Agricultural Entomology has prepared its Annual Report for the year 2022-23. 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 indifferent activities, both in academic and research, and are excellent competitors in different examinations like JRF, NET, SRF etc. 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. The 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 and is continuously working on different parameters of Biological Control of crop pests and weeds.

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 2022-23 so successfully.

Date: 10.11.2023
Place: Pundibari


(Prof. J. Ghosh) 10/11/2023

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Executive summary of the Department of Agril. Entomology (2022-23)

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 were ENT-151, ENT-152, ENT-201, ENT- 251, ENT- 301, ENT-351, ENT-352 and ENT- 353 during the tenure 2022-23.

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 the thesis
1.	A. Sankeerthana	F	Telangana	Dr. M. Chatterjee	Study on hexapod natural enemy complex of rice ecosystem under Terai region of West Bengal
2.	Gouri Sankar Nandi	M	West Bengal	Prof. J. Ghosh	Evaluation of some indigenous plant powders as grain protectant against <i>Callosobruchus maculatus</i> on cowpea (<i>Vigna unguiculata</i>)
3.	Jayashree S.	F	Tamil Nadu	Prof. S. Pal	Investigation on diversity, bio-ecology and management of phytophagous Coccinellid beetles
4.	Kalla Pushpa	F	West Bengal	Prof. N. Laskar	Effect of edaphic factors on pupation behaviour of Tephritid fruit flies
5.	Md. Sarafat Ali	M	West Bengal	Prof. T. K. Hath	Comparative bio-ecological studies of <i>Callosobruchus chinensis</i> and <i>Callosobruchus maculatus</i> in different pulses
6.	S. Manohar	M	Telangana	Prof. S. K. Sahoo	Isolation, characterisation and bio-efficacy study of <i>Beauveria bassiana</i> (UBKV Bb1) against different insect orders
7.	Balaga Pranaya	F	Andhra Pradesh	Prof. N. Chowdhury	Role of parasitism on bionomics of brinjal Fruit and Shoot borer (<i>Leucinodes orbonalis</i> Guenee)

ii) Ph. D.

SL No	Name of the Student	Gender	Home state	Supervisor	Title of the thesis
1.	Moulita Chatterjee	F	West Bengal	Prof. J. Ghosh	Incidence of Rice Leaf Folder, <i>Cnaphalocrosis Medinalis</i> Guen and their Ecological Management under Terai Region of West Bengal
2.	Bireshwar Kundu	M	West Bengal	Dr. T. Dhar	Study of Insect Pest Dynamics in Blackgram And Probable Resistance Factors in Variable Response by Different Local Genotypes
3.	Fouzia Bari	F	Bihar	Prof. S.K.Senapati	Banana Leaf and Fruit Scarring Beetle (Chrysomelidae: Coleoptera) and its Safe Management.
4.	Shriti Moses	F	Bihar	Prof. J. Ghosh	Diversity, Population Structure and Conservation of Predatory Spiders in Rice Eco-System in Terai Region of West Bengal
5.	Suraj Sarkar	M	West Bengal	Prof. S. Pal	Bio-intensive Pest Management in Brinjal through Farmscaping and Bio-rationals.
6.	Sibananda Singha	M	West Bengal	Prof. N. Laskar	Biotic Stress of Honey Bee (<i>Apis mellifera</i> Linn) and their Eco-Friendly Management under Terai Region of West Bengal.

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

SL No	Name of the student	Gender	Home state	Supervisor	Title of the thesis
1.	Pankaj Patel	M	West Bengal	Dr. P. Sarkar	– Yet not finalised –
2.	Prapti Panja	F	-Do-	Prof. T. K. Hath	
3.	Shubhayan Dutta	M	-Do-	Mr. D. Chakraborty	

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

SL No	Name of the student	Gender	Home state	Supervisor	Title of the thesis
1.	Debanjan Chakraborty	M	West Bengal	Prof. S. K. Sahoo	Studies on Bio-ecology of Invasive Whitefly species in Sub-Himalayan West Bengal.
2.	Tapas Kumar Hembram	M	West Bengal	Dr. T. Dhar	Study on Feeding Preference and Digestive Physiology of <i>Spodoptera frugiperda</i> (Smith) and <i>Spodoptera Litura</i> (Fab.) on Different Hosts.
3.	Atanu Maji	M	West Bengal	Prof. S. K. Sahoo	Morphometric and Molecular Characterization of Aphids (Aphididae: Hemiptera) on Vegetable and Fruit Crops in West Bengal
4.	Riju Nath	M	West Bengal	Prof. S. K. Senapati	Study on pollinators under Terai Agro-climatic Region of West Bengal
5.	Tumma Mounika	F	Telangana	Prof. T. K. Hath	Diversity of Insect-pests of Stored Pulses with Special Reference to Bio-ecology of <i>Callosobruchus chinensis</i> under Terai Agro-Ecology of West Bengal
6.	Pousabh Das	M	West Bengal	Dr. Wasim Reza	Key Insect-pest and their Management at Different Growth Stages of Paddy (<i>Oryza sativa</i> L.) in Terai Region of West Bengal
7.	Deepika Gadaily	F	Sikkim	Dr. T. Dhar	Studies on Insect-pest and Natural Enemy Biodiversity in Cabbage (<i>Brassica oleracea</i> var. capitata L.) under Terai Zone of West Bengal
8.	Toge Riba	M	Arunachal Pradesh	Dr. N. Chowdhury	Pest Constraints of Litchi (<i>Litchi chinensis</i> Sonn) at Different Agro-climatic Sub-region of Zone-II (India)
9.	Abhijit Bhadra	M	West Bengal	Dr. W. Reza	Studies on relative efficacy of new chemical pesticides against soybean (<i>glycine max</i> l.) pests vis-à-vis their seasonal incidence and subsequent effect on oil and protein content
10.	Adrish Dey	M	West Bengal	Prof. N. Laskar	Assessment of spatio-temporal variation in bee-forage in West Bengal through melissopalynological investigations.
11.	Dosa Rajeswari	F	Telangana	Prof. S. Pal	Pest complex of Maize and their sustainable management

12.	Sanjoy Samanta	M	West Bengal	Prof. S. K. Senapati	Studies on insect fauna with reference to pests and pollinators acting upon ridge gourd (<i>Luffa acutangula</i> L. Roxb.) in Terai region of West Bengal
13.	Subham Kr. Sarkar	M	West Bengal	Prof. J. Ghosh	Diversity, population dynamics and basis of resistance against pod borer complex of redgram (<i>Cajanus cajan</i> L. Millsp.) under Terai zone of W.B.
14.	Swagata Bhowmik	F	Tripura	Prof. S. K. Sahoo	Studies on aphid faunal diversity in field crops particularly cereals, pulses and oilseeds with special reference to seasonal abundance of aphid species of field pea and mustard

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:

i) M.Sc. students

Sl. No.	Name of the students	Name of the Scholarship	Amount (Rs.)
1.	Pankaj Patel	Swami Vivekananda Merit-cum-Means Scholarship	18,000/- per year
2.	Shubhayan Dutta	-Do-	18,000/- per year

ii) Ph.D. students

Sl. No.	Name of the students	Name of the Scholarship	Amount/month (Rs.)
1.	Riju Nath	University Research Scholar	18,000/- per month
2.	Tumma Mounika	Non-NET Swami Vivekananda Merit-cum-Means Scholarship	8,000/- per month
3.	Pousabh Das	University Research Scholar	18,000/- per month
4.	Deepika Gadaily	Non-NET Swami Vivekananda Merit-cum-Means Scholarship	8,000/- per Month
5.	Abhijit Bhadra	University Research Scholar	18,000/- per month
6.	Adrish Dey	AIEEA (JRF/SRF) Ph.D.	31,000/- per month
7.	Dosa Rajeswari	Non-NET Swami Vivekananda Merit-cum-Means Scholarship	8,000/- per month
8.	Sanjoy Samanta	University Research Scholar	18,000/- per month
9.	Subham Kr. Sarkar	-Do-	18,000/- per month
10.	Swagata Bhowmik	Non-NET Swami Vivekananda Merit-cum-Means Scholarship	8,000/- per Month
11.	Keerthana B.	-Do-	8,000/- per Month
12.	Samrat Saha	University Research Scholar	18,000/- per month
13.	Soheli Sarkar	-Do-	18,000/- per month

3.3 Involvement of teachers in various research projects:

SL. No.	Name of the projects/ scheme	Name of the P.I.	Year of commencement	Funding Agency	Total Budget (Rs.)
1.	AICRP on Biological Control of Crop Pests and Weeds	Prof. S. K. Sahoo	2018	ICAR-NBAIR	Contingency Centre
2.	Bio-efficacy, Phytotoxicity and residue of Fipronil 4% + Acetamiprid 4% SC against pests of Okra and Tomato	Prof. J. Ghosh	2019	Parijat Industries Pvt. Ltd.	7.98 lakh
3.	Bio-efficacy trial of Emamectin benzoate 1.5% + Profenophos 35% WDG against green semilooper, pod borer, girdle beetle & tobacco caterpillar in Soybean.	Prof. J. Ghosh	2021	-Do-	2.80 lakh
4.	Efficacy testing of Sulfoxaflor + Bifenthrin 15% SE w/w against sucking pests in Brinjal, Tomato, Okra and Chilli	Dr. M. Chatterjee	2021	Dow Agro Sciences India Private Limited	16.80 lakh
5.	Evaluation of Chlorantraniliprole 9.3% w/w + Lambda Cyhalothrin 4.6% w/w ZC (Ampligo 150 ZC) in Rice through Drone application	P.I.: Prof. A. Roy Co-PI: Prof. S. K. Sahoo	2021	Syngenta	2.50 lakh
6.	Evaluation of some new generation molecules against different pests of cotton, chilli and maize	Prof. J. Ghosh	2022	Willowood Chemicals Private Limited	14.00 lakh

4. Extension Activities

Several training programmes were organised under the extension activities during 2022-23. These are as follows –

- Training programme was organised on BIPM in rice among tribal farmers under AICRP- Biological control on 12.08.2022 at Singimari, Coochbehar-II (No. of beneficiaries-25).
- Training cum input distribution (bio-agents) was organised among tribal farmers under AICRP- Biological control was done 20.09.2022 at Singimari, Coochbehar-II (No. of beneficiaries-20).
- Training cum input distribution (bio-agents) was organised among tribal farmers under AICRP- Biological control was organised on 26.09.2022 at Baniagaon, Alipurduar (No. of beneficiaries-20).

- d) Training programme was organised on Seasonal and migratory bee-keeping under TSP of AICRP-Biological control on 18.11.2022 at Department of Entomology, UBKV, Pundibari (No. of beneficiaries-16).
- e) Training cum input distribution programme was organised for tribal farmers under AICRP-Biological control on 13.02.2023 at Singimari, Coochbehar-II (No. of beneficiaries-20).
- f) Training cum input distribution programme for tribal farmers under AICRP-Biological control on 06.03.2023 at Baniagaon, Alipurduar (No. of beneficiaries-20).

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 (Fundamentals of Entomology)	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**a) 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.	Dr. 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	Mrs. M. Chatterjee	Assistant Professor	Economic Entomology and Acarology	Ph.No.9679350517 Email: mouлита.2014@gmail.com
6.	Mr. D. Chakraborty	Assistant Professor	Economic Entomology	Ph.No.9647800589 Email: debanjan.ubkv@gmail.com

b) 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

i. Research Articles

Sl. No.	Title	Author(s)	Journals with NAAS Rating/Other rating
1.	Studies on traps and attractants for monitoring and mass trapping of fruitflies (Diptera, Tephritidae) in cucurbit ecosystem in Tripura, N.E. India (April, 2022)	Nair, N., Chatterjee, M. , De, B., Das, K and Sehgal, M.	<i>Journal of Entomological Research</i> , 46 (1): 87-92. (NAAS rating 5.89) (ISSN: 0378-9519)
2.	Higher activity of Glutathione S-transferase enzyme is associated with field evolved resistance in <i>Empoasca flavescens</i> Fabricius (May, 2022)	Patra, B., Mandal, S., Sahoo, S.K. and Hath, T. K.	<i>International Journal of Tropical Insect Science</i> , 42 (1): 2887-2895. (NAAS rating 6.77) (ISSN: 1742-7584)
3.	Diversity and distribution of <i>Callosobruchus</i> spp. attacking stored chickpea in northern tracts of West Bengal (May, 2022)	Mounika, T., Sahoo, S.K. and Chakraborty, D.	<i>International Journal of Environment and Climate Change</i> , 12 (10): 488-493 (NAAS rating 5.13) (ISSN: 2581-8627)
4.	Pulse beetle diversity in Sub Himalayan West Bengal (May, 2022)	Mounika, T., Sahoo, S.K. , Chakraborty, D. and Sreedevi, K.	<i>Journal of Entomological Research</i> , 46 (S): 1148-1153. (NAAS rating 5.89) (ISSN: 0378-9519)
5.	Susceptibility of different rejuvenated mango cultivars to leaf cutting weevil (<i>Deporaus marginatus</i>) (July, 2022)	Polu, P., Sahoo, S.K. and Bhowmick, N.	<i>Agricultural Mechanization in Asia</i> , 53 (05): 7589-7594. (NAAS rating 6.14) (ISSN: 0084-5841)
6.	Diversity of aphids and their predatory coccinellids from West Bengal (July, 2022)	Maji, A., Pal, S., Gurung, B., Chatterjee, M. and Sahoo, S. K.	<i>Indian Journal of Entomology</i> , 85 (2): 332-336. (NAAS rating 5.08) (ISSN: 0367-8288)
7.	Influence of Weather Parameters on Predatory Spider Population in Rice Ecosystem of Terai Region of W.B. (July, 2022)	Moses, S., Chaudhuri, N., Pal, S. and Ghosh, J.	<i>The Pharma Innovation Journal</i> , 11 (9S): 1271-1276 (NAAS rating 5.23) (ISSN: 2349-8242)
8.	Seasonal incidence of parasitic mites on <i>Apis mellifera</i> Linn. colonies under terai agro-ecological situation of West Bengal (December, 2022)	Singha, S., Saha, S., Nath, R. and Laskar, N.	<i>The Pharma Innovation Journal</i> , 11 (12S): 01-05. (NAAS rating 5.23) (ISSN: 2349-8242)

ii) Book:

Sl. no.	Title	Editors	Detail of Publication
1.	Pests of Fruit Crops	Laskar, N. and Phani, V.	Nipa Genx Electronic Resources & Solutions Pvt. Ltd., New Delhi – 110034
2.	<i>Mou Katha</i> (in Bengali)	Laskar, N.	Chayya Publication, Kolkata

iii) Book Chapter:

Sl. no.	Title	Authors	Detail of Publication
1.	Pests of Mango ecosystem and their integrated management. In: Pests of Fruit Crops. Pp 1-38.	Sahoo, S.K. , Nayak, U.S. and Maji, A.	Nipa Genx Electronic Resources & Solutions Pvt. Ltd., New Delhi.
2.	Mass production of important natural enemies and their field applications. In: Plant Protection – Present Developments and Future Strategies	Halder, J., Divekar, P. and Chatterjee, M.	Today & Tomorrow's Printers and Publishers, New Delhi.
3.	Recent trends in management of stored grain insect pests. In: Plant Protection – Present Developments and Future Strategies. Pp. 159-187	Chatterjee, M. and Chakraborty, D.	Today & Tomorrow's Printers and Publishers, New Delhi.

iv) Bulletin:

Sl. No.	Title	Authors	Detail of Publication
1.	Trichocard – Joibik Upaaye Fosoler Poka Niyantraner Ekti Notun Upaay. Published by during 2022-23.	Chatterjee, M., Sahoo, S. K. , Debnath, A., Patra, B. and Chakraborty, D.	AICRP Biological Control of Crop Pests and Diseases, ICAR-NBAIR (UBKV Unit)

v) Abstract: Nil**vi) Popular Article: Nil**

8. SYMPOSIUM/ TRAININGS/ SEMINARS ATTENDED AND ORGANISED:

Sl. No.	Topic of seminar (Attended by)	Venue and Date	Duration	National/ International	Funding Agency/Organiser (ICAR/Other)
1.	National Seminar on Horticulture for Sustainable Development, Nutritional & Livelihood Security (Prof. J. Ghosh and Mr. D. Chakraborty)	26.05.2022 to 27.05.2022	2 days	National	Uttar Banga Krishi Viswavidyalaya, Pundibari
2.	IV th International Conference in Hybrid Mode on Innovative and Current Advances in Agriculture and Allied Sciences (M. Chatterjee)	Online Mode 12.06.2022 to 14.06.2022	2 days	International	Himachal Pradesh University Summer Hill, Shimla (H.P.)
3.	National Seminar on Climate Resilient and Input efficient Agriculture for Food and Nutritional Security (M. Chatterjee)	19.01.2023 to 20.01.2023	2 days	National	Uttar Banga Krishi Viswavidyalaya, Pundibari
4.	National Conference on Technological Advancement, Innovation and Entrepreneurship Development in Agriculture and Allied Sectors (M. Chatterjee)	16.03.2023 to 18.03.2023	2 days	National	Uttar Banga Krishi Viswavidyalaya, Pundibari
5.	Training programme on "Digital Content creation and Management" (D. Chakraborty)	28.03.2023 to 30.03.2023	2 days	Institutional	ICAR-NAARM and NAHEP-IG UBKV
6.	31 st Annual Group Meeting of AICRP-Biological Control (Prof. S. K. Sahoo, M. Chatterjee and D. Chakraborty)	Online Mode 20.10.2022 to 21.10.2022	2 days	National	ICAR-NBAIR

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.	Prof. S. K. Sahoo	COBACAS Entomological Society of India Society of Biological Control Advancement
5.	Mrs. M. Chatterjee	COBACAS Crop and Weed Science Society
6.	Mr. D. Chakraborty	COBACAS

10. OTHER ACTIVITIES AND ACHIEVEMENTS

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

Sl. No.	Acted as Resource Person(Topic)	Date(s) of Training	Funding Agency/Organiser (ICAR/Other)
1.	Training programme on “Seasonal Management and Migratory Beekeeping for Tribal Farmers” at UBKV (Prof. S. K. Sahoo, Dr. M. Chatterjee and D. Chakraborty)	18.11.2022	Deptt. of Entomology, UBKV and AICRP Biocontrol (UBKV Centre)
2.	Training programme on “BIPM in Rice” and distributed inputs to Tribal farmers related to Biocontrol at Singimari and Baniagaon (Prof. S. K. Sahoo, Dr. M. Chatterjee and D. Chakraborty)	12 th of August, 20 th and 26 th of September, 2022 and 13 th of February and 06 th of March, 2023	AICRP Biocontrol (UBKV Centre)
3.	Lectures on “Biological Control for Creating Awareness among the farmers” (Prof. S. K. Sahoo)	07 th and 09 th June, 16 th and 18 th August and 20 th December of 2022.	DAESI and ATC, Cooch Behar
4.	Reviewer of Research Paper	(i) Journal of Crop and Weed (ISSN 0974 6315) (ii) International Journal of Bio-resource and Stress Management (ISSN 0976-3988) (iii) Pesticide Research Journal (ISSN 0970-6763) (iv) International Journal of Bio-resource and Stress Management (ISSN 0976-3988)	Prof. S. K. Sahoo

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/Journal	No. of Teachers/ Academic Staff
1.	Thesis evaluator	JNKVV, Jabalpur	Prof. J. Ghosh

Photographs

Teaching related



PG Students during field practical



UG Students during field practical

Research related



PG students doing research work with honeybee boxes



PG student doing research work on stored grain pests

Extension related



Training Programme for Tribal Farmers at Baniagaon, Alipurduar under AICRP on Biological Control project



Awareness programme on Biological Control at Singimari, Patlakaowa