



ANNUAL *Report*

2021-22



POMOLOGY AND POSTHARVEST TECHNOLOGY
FACULTY OF HORTICULTURE
Uttar Banga Karishi Viswavidyalaya
Pundibari : Cooch Behar

Annual Report

2021-22



**Pomology and Post-Harvest Technology
Uttar Banga Krishi Viswavidyalaya
Pundibari : Cooch Behar**

PREFACE

I am pleased to present the Preface for the Annual Report of the Department of Pomology and Post Harvest Technology for the year 2021-22. This report serves as a comprehensive overview of our department's activities, encompassing teaching, research, and various initiatives. Nestled within the heartland of agricultural potential, our department finds itself in a region teeming with arable land and a diverse range of agro-climatic conditions that lend themselves to the cultivation of different crops. However, despite the inherent advantages, the agricultural landscape remains fraught with challenges, ranging from soil nutrient deficiencies to crop pests, diseases, and suboptimal farming techniques.



In response to these pressing challenges, our department has embarked on a mission to bolster sustainable farming practices. Our objectives are multi-faceted, encompassing the dissemination of advanced agricultural techniques, the implementation of environmentally conscious farming methods, the introduction and evaluation of new crop varieties, and the development of innovative solutions to mitigate postharvest losses. These collective efforts converge to elevate both agricultural output and efficiency while promoting long-term ecological stability.

Recognizing the pivotal role that sustainable farming practices play in ensuring food security, environmental preservation, and rural livelihoods, our department is poised to make substantial contributions. Over our history, which spans several decades, we have consistently upheld the values of agricultural education, research, and community outreach.

Fostering an academic and research environment that nurtures innovation, environmental stewardship, and the effective transfer of knowledge is paramount to achieving our department's vision. While we acknowledge the constraints posed by resource limitations and the evolving agricultural landscape, we remain resolute in our belief that, collectively, we can surmount these challenges and drive our department toward greater accomplishments.

I extend my sincere appreciation to our dedicated faculty members, staffs and students for completion of academic and research activity even during the pandemic situation of COVID-19. Their dedication, hard work, and commitment to our shared mission continue to shape the future of agriculture and sustainable farming practices. Together, we embark on this journey to create a more resilient and sustainable agricultural future.

A rectangular box containing a handwritten signature in blue ink that reads "N. Bhowmick". Below the signature, the text "Head" is written in a smaller font. Underneath that, the department name "Dept. of Pomology & Post Harvest Technology" is printed, followed by "Faculty of Horticulture" and the address "Ultras Banga Erata Vignavithayalaya, Pundhori, Cochin Bazar, WB-736145".

(NILESH BHOWMICK)

A. TEACHING AND NON- TEACHING STAFFS OF THE DEPARTMENT

1) TEACHING STAFFS

a) **Cadre Posts:** Professor – 1, Associate Professor –2, Assistant Professor –3,

b) **Present Strength :**

Sl. No.	Name	Designation	Date of joining	Contact details	Remark
1.	Prof. Prodyut Kr Paul	Professor & Dean (Discipline: Post Harvest Technology)	10.12.2001	Mob: 8016425515 Email: prodyut24@yahoo.com	--
2.	Dr. Nilesh Bhowmick	Associate Professor & Head (Discipline: Fruit Science)	27.11.2007	Mob: 9433438982 Email: nileshbhowmick@gmail.com	--
3.	Dr. Mutum Preema Devi	Assistant Professor (Discipline: Post Harvest Technology)	07.07.2014	Mob: 7063102366 Email: preema.horti@gmail.com	--
4.	Dr. Aditi Chakraborty	Assistant Professor (Discipline: Fruit Science)	20.10.2014	Mob: 9432842864 Email: aditi.chatterjee10@gmail.com	--
5.	Dr. Binayak Chakraborty	Assistant Professor (Regional Research Station-Terai Zone) [Discipline: Fruit Science]	16.01.2020	Mob: 9426922718 Email: binayak.hort@gmail.com	--

2) NON-TEACHING STAFFS

Sl. No.	Name	Designation	Date of joining	Contact number	Remark
1.	Mr. Nitish Ch. Saha	Technical Assistant, Grade-I (Teaching)	03.7.1989	9475835338	--
2.	Mr. Ananda Sarkar	Laboratory Attendant, Grade-II	01.09.2008	8927242990	--
3.	Mr. Sourav Bhowmick	Jr. Laboratory Attendant	10.02.2021	9735061928	University Joining on 3.11.2014

3) STUDENT INTAKE CAPACITY

Under Graduate Programme

a) **B.Sc. (Hort.) Hons:-**20 in each Academic Session under the Faculty of Horticulture.

Post Graduate Programme

The Department has started for offering of M.Sc. and Ph.D. degree in two disciplines namely Fruit Science & Post Harvest Technology from the academic session of 2017-18.

b) **M. Sc. Programme:** Two students per teacher per academic session in each disciplines

c) **Ph.D. Programme:** Maximum 6 students in Fruit Science & 2 students in Post Harvest Technology discipline subject to maximum intake of 4 students per teacher at any point of entry time

4) DEPARTMENTAL ACTIVITIES

(i) Teaching Programme

(a) Courses Offered in Under Graduate level

Sl. No.	Course No.	Course Title	Credit	Course Leader	Associated teachers
1.	PPT 101	Fundamentals of Horticulture	1+1	Dr. N. Bhowmick	Dr. B. Chakraborty Teacher of VSC
2.	PPT 102	Plant Propagation and Nursery Management	1+1	Dr. A. Chakraborty	Dr. B. Chakraborty
3.	PPT 151	Orchard and Estate Management	1+1	Dr. N. Bhowmick	Dr. A. Chakraborty
4.	PPT 152	Dry Land Horticulture	1+1	Dr. A. Chakraborty	Dr. B. Chakraborty
5.	PPT 201	Temperate Fruits	1+1	Dr. B. Chakraborty	Dr. A. Chakraborty
6.	PPT 251	Tropical and Subtropical Fruits	3+1	Dr. A. Chakraborty	Dr. B. Chakraborty
7.	PPT 252	Production Technology for Fruit and Plantation Crops	1+1	Dr. B. Chakraborty	Teacher from PCP
8.	PPT 301	Post harvest management of horticultural crops	2+1	Dr. M.P. Devi	Prof. P.K. Paul
9.	PPT 351	Breeding of Fruit and Plantation Crops	2+1	Dr. N. Bhowmick	Dr. A. Chakraborty
10.	PPT 352	Principles of Food Science and Nutrition	2+0	Prof. P.K. Paul	Dr. M.P. Devi
11.	PPT 353	Post Harvest Management and Value Addition of Fruits and Vegetables	1+1	Dr. M.P. Devi	Prof. P.K. Paul
12.	ELC 352	Food Safety and Standards	2+1	Dr. M.P. Devi	Prof. A. Roy Dr. H.S. Konar

(b) Courses Offered for M. Sc. Programme

Sl. No.	Course No	Course Title	Credit	Course Leader	Associated teachers
1.	FSC 501	Tropical Fruit Production	2+1	Dr. N. Bhowmick	Dr. A. Chakraborty
2.	FSC502	Sub-Tropical and Temperate Fruit Production	2+1	Dr. A. Chakraborty	Dr. B. Chakraborty
3.	FSC 503	Propagation and Nursery Management of Fruit Crops	2+1	Dr. B. Chakraborty	Dr. N. Bhowmick
4.	FSC 504	Breeding of Fruit Crops	2+1	Dr. N. Bhowmick	Dr. A. Chakraborty
5.	FSC 505	Systematics of Fruits Crops	2+1	Dr. A. Chakraborty	Dr. B. Chakraborty
6.	FSC 506	Canopy Management in Fruit Crops	1+1	Dr. A. Chakraborty	Dr. N. Bhowmick
7.	FSC 507	Growth and Development of Fruits Crops	2+1	Dr. A. Chakraborty	Dr. B. Chakraborty
8.	PHT 501	Post-harvest Physiology and Biochemical of Fruits and Vegetables	2+1	Prof. P.K. Paul	Dr. M. P. Devi
9.	PHT 502	Post-harvest Management of	2+1	Dr. M. P. Devi	Prof. P.K. Paul

		Fruits and Vegetables			
10	PHT 507	Processing of Plantation, Spices, Medicinal and Aromatic Crops	1+1	Dr. M. P. Devi	Dr. S. Das (From PCP Department)

(c) .Courses Offered for Ph.D Programme

Sl. No.	Course No	Course Title	Credit	Course Leader	Associated teachers
1.	FSC 601	Advances in Breeding of Fruit Crops	2+1	Dr. B. Chakraborty	Dr. N. Bhowmick Dr. A. Chakraborty
2.	FSC 602	Advances in Production of Fruit Crops-I	2+1	Dr. A. Chakraborty	Dr. B. Chakraborty Dr. N. Bhowmick
3.	FSC 603	Advances in production of fruit crops- II	2+1	Dr. B. Chakraborty	Dr. N. Bhowmick Dr. A. Chakraborty
4	FSC 691	Doctoral Seminar-I	1+0	Dr. B. Chakraborty (Seminar Leader)	
5.	FSC 692	Doctoral Seminar-II	1+0	Dr. B. Chakraborty (Seminar Leader)	
6.	FSC 693	Doctoral Seminar III		Dr. B. Chakraborty (Seminar Leader)	
7.	PHT 601	Advances in Postharvest Handling of Perishables	2+1	Dr. M.P. Devi	Prof. P.K. Paul
8.	PHT 602	Advances in Post-harvest Physiology	2+0	Dr. M.P. Devi	Prof. P.K. Paul
9.	PHT 603	Advances in Fruit Preservation	2+0	Dr. M.P. Devi	Prof. P.K. Paul
10.	PHT 604	Fruits and vegetables waste Management	2+0	Dr. M.P. Devi	Prof. P.K. Paul
11.	PHT 691	Doctoral Seminar-I	1+0	Dr. A. Chakraborty Seminar Leader)	
12.	PHT 692	Doctoral Seminar-II	1+0	Dr. A. Chakraborty (Seminar Leader)	
13.	PHT 693	Doctoral Seminar III	1+0	Dr. A. Chakraborty (Seminar Leader)	
14.	PPT 999	Pre-submission Thesis Seminar	1+0	Dr. N. Bhowmick (Seminar Leader)	

(ii) Students of the Department:

a) M.Sc Students

Sl No.	Name	Semester	Thesis title	Advisory Committee	Scholarship enjoyed
M.Sc (Hort.) in Fruit Science					
1.	Swadesh Gurung (H-2019-015-M)	Completed	Standardization of kiwifruit (<i>Actinidia deliciosa</i>) propagation techniques through cuttings	Dr. N. Bhowmick (Chairman) Prof. P.K. Paul Prof. A. N.Dey Prof. A. Ghosh Dr. S. Mandal	University Merit Scholarship @ Rs. 600 per month.
2.	Viswanatha K.E (H-2019-017-M)	Completed	Effect of foliar spray of Zinc-nano-particle on guava (<i>Psidium</i>	Dr. N. Bhowmick (Chairman) Dr. A. Chakraborty	National Talent Scholarship funded by

			<i>guajava</i> L.)	Prof. D. Mukhopadhyay Prof. A. Ghosh, Dr. S. Mandal	ICAR @ Rs 5000 per month.
3.	Zigme Wangchuk Sherpa (H-2019-018-M)	Completed	Comparative study on morphology and biotic stress in F ₁ and their parent of guava	Dr. A.Chakraborty (Chairman) Dr. N. Bhowmick, Prof. A.N. Dey Prof. A.Sarkar Dr. S. Khalko.	University Merit Scholarship @ Rs. 600 per month.
4.	Kavitha Singh (H-2020-010-M)	3 rd & 4 th	Standarization of propagation technique of water apple and Malay apple through cuttings	Prof. (Dr). N. Bhowmick (Chairman) Dr. A. Chakraborty Dr. B. Chakraborty Dr. M.P. Devi	University Merit Scholarship @ Rs.600 per month.
5.	Rajesh Das (H-2020-011-M)	3 rd & 4 th	Effect of fruit bunch bagging in litchi (<i>Litchi chinensis</i> Sonn.) cultivars	Dr. A. Chakraborty (Chairman) Dr. N. Bhowmick Dr. M.P. Devi Dr. N. Sahana	University Merit Scholarship @ 600 per month.
6.	Sudarshana Bhujel (H-2020-011-M)	3 rd & 4 th	Studies on the effect of bio-stimulants on the performance of strawberry (<i>Fragaria x ananasa</i> Duch.) cv.Festival	Prof. (Dr). N. Bhowmick (Chairman) Dr. A. Chakraborty Dr. B. Chakraborty Dr. M.P. Devi	University Merit Scholarship @ Rs.600 per month.
7.	Diya Ghosal (H-2021-010-M)	1 st	Not Yet Decided	Dr. A. Chakraborty (Chairman) Dr. N. Bhowmick Dr. M. P. Devi Dr. M. Chakraborty	University Merit Scholarship @ Rs.600 per month.
8.	Gururaj (H-2021-012-M)	1 st	Not Yet Decided	Dr. N. Bhowmick (Chairman) Dr. A. Chakraborty, Dr. N. Sahana Dr. R. Mondal Dr. M. P. Devi	National Talent Scholarship funded by ICAR @ Rs.5000 per month.
9.	Nalamati Durga Apoorva (H-2021-011-M)	1 st	Not Yet Decided	Dr. B. Chakraborty (Chairman) Dr. N. Bhowmick Dr. N. Sahana Dr. A. Das Dr. S. Ojha	National Talent Scholarship funded by ICAR @ Rs.5000 per month
10.	Shahil Reza (H-2021-13-M)	1 st	Not Yet Decided	Dr. A. Chakraborty (Chairman) Dr. N. Bhowmick Dr. B. Chakraborty	Swami Vivekananda Merit Cum Means

				Dr. A. N. Dey	Scholarship funded by GoWB @ Rs. 2500 per month.
11.	Y.Tejaswini (H-2021-014-M)	1 st	Not Yet Decided	Dr. N. Bhomwick (Chairman) Dr. B. Chakraborty, Dr. N. Sahana Dr. A.T. Kundu Dr. M. P. Devi	National Talent Scholarship funded by ICAR @ Rs.5000 per month.
M.Sc (Hort.) in Post Harvest Technology/Management					
1.	Damonhi Phyllei (H-2019-005-M)	Completed	Pulsed temperature treatment for uniform ripening and shelf life improvement of banana	Prof. P.K. Paul (Chairman) Dr. M.P. Devi Dr. N. Bhowmick Dr. N. Sahana	University Merit Scholarship @ Rs 600 per month
2.	Sweta Malakar (H-2019-016-M)	Completed	Standardization and quality evaluation of blended pummelo squash (<i>Citrus grandis</i> (L.) Osbeck)	Dr. M.P. Devi (Chairman) Prof. P.K. Paul Prof. I. Sarker Dr. S.Sikdar	University Merit Scholarship @Rs 600 per month
3.	Aamir Humayun (H-2020-017-M)	3 rd & 4 th	Arrest of polyphenol oxidase in potato	Prof. P.K. Paul Dr. M.P. Devi Dr, S. Das Dr. M. Debnath Dr. N. Sahana	University Merit Scholarship @ Rs 600 per month
4.	Sanasam Angousana (H-2020-019-M)	3 rd & 4 th	Study on food safety knowledge, attitude, practices of skilled workers of food industries of Manipur	Dr. M.P. Devi Prof. P.K. Paul Dr. S. Mandal Dr. M. K. Debnath	University Merit Scholarship @ Rs 600 per month
5.	Kavya D (H-2021-032-M)	1 st	Not Yet Decided	Dr. M. P. Devi (Chairman) Dr. P. K. Paul Dr. B. Chakraborty Dr. S. Mandal	National Talent Scholarship funded by ICAR @ Rs 5000 per month
6.	Seedari Balu Mahendra (H-2021-021-M)	1 st	Not Yet Decided	Dr. M. P. Devi (Chairman) Dr. P. K. Paul Dr. H. Bhattacharjee Dr. A. Chakraborty Dr. N. Sahana	University Merit Scholarship @ Rs 600 per month

b) Doctoral Degree

Sl No.	Name	Semester	Thesis title	Advisory Committee	
Ph.D in Pomology and Post Harvest Technolgy					
1.	Sukanya Misra (H-2016-005-D)	Awarded (13/12/21)	Effect of plant population and mulching on strawberry (<i>Fragaria × ananassa</i>) cultivation under Terai region of West Bengal	Dr. S. Gurung (Chairman) Prof. P.K. Paul Prof. P.S. Medda Dr. M.K. Debnath	University Research Scholarship @ Rs. 20000 per month.
Ph.D (Hort.) Fruit Science					
2.	Kondle Ravi (H-2017-004-D)	Awarded (16/7/2021)	Effect of pruning and nutrient management of acid lime (<i>Citrus aurantifolia</i> Swingle) cv. Balaji under sub-himalayan Terai region of WB	Dr. S. Gurung (Chairman) Dr. N. Bhowmick Prof. P.K. Paul Prof. D. Mukhopadhyay	Swami Vivekananda Merit Cum Means Scholarship funded by Go WB @ Rs. 8000 per month.
3.	Polu Parameshwar (H-2018-012-D)	Awarded (29/10/21)	Impact of rejuvenation, shoot pruning on vegetative, flowering, fruit characteristics and pest incidence of mango	Dr. N. Bhowmick (Chairman) Prof. P.K. Paul Prof. P.S. Medda Dr. S.K. Sahoo Dr. S. Khalko	Swami Vivekananda Merit Cum Means Scholarship funded by Go WB @ Rs. 8000 per month.
4.	Bidyarani Devi Senjam (H-2018-004-D)	7 th & 8 th	Studies on genetic variability and standardization of propagation techniques in pummelo (<i>Citrus grandis</i> (L.) Osbeck)	Dr. N. Bhowmick (Chairman) Prof. P.K. Paul Prof. S. Gurung Dr. A. Kundu Prof. A.N. Dey	DST-INSPIRE Fellowship funded by Government of India @ Rs. 31000 per month
5.	Nim Tshering Sherpa (H-2019-003-D)	5 th & 6 th	Mass Multiplication and creation of variability of strawberry by tissue culture	Dr. A. Chakraborty (Chairman) Dr. N.Bhowmick Dr. B. Chakraborty Dr. N.Sahana Dr. S. Ojha	National Fellowship for Higher Education of ST Students funded by Government of India @ Rs.

					31000 per month
6.	Novin Chamling (H-2019-004-D)	4 th & 5 th	Effect of boron on morpho-physiological and biochemical changes in Darjeeling Mandarin (<i>Citrus reticulata</i> Blanco.) Seedlings under aluminium Stress condition	Dr. N.Bhowmick (Chairman) Dr. B. Chakraborty Prof. A. K. Sinha Dr. P. Dutta Dr. S. Mandal	University Research Scholarship @ Rs. 18000 per month.
7.	Santhoshkumar GM (H-2019-007-D)	5 th & 6 th	Influence of Plant growth promoting microorganisms on the performance of strawberry (<i>Fragaria x ananasa</i> Dutch) under the influence of abiotic stresses	Dr. N. Bhowmick (Chairman) Dr. A. Chakraborty Dr. A. Roy Prof. A. K. Sinha Dr. S. Mandal	Junior Research Fellow under project funded by Department of Science and Technology and Biotechnology, GoWB@ Rs 18700 per month.
8.	Vivek Kumar (H-2020-013-D)	3 rd & 4 th	Effect of Micro-nutrient and soil moisture regimes on growth and fruiting behavior of papaya (<i>Carica papaya</i> L.)	Dr. A.Chakraborty (Chairman) Dr. N. Bhowmick Dr, P.S. Medda Dr. D. Mukhopadhyay Dr. S. Mandal	Swami Vivekananda Merit Cum Means Scholarship funded by Go WB @ Rs. 8000 per month.
9.	Saidiksha Subba (H-2020-005-D)	3 rd & 4 th	Growth, Yield and quality of Avocado (<i>Persia americana</i> Miller.) as effected by organic management practices in hilly region of West Bengal.	Prof. S. Gurung (Chairman) Dr. N. Bhowmick Dr. M.P. Devi Dr. S. Mandal Dr. A. Ghosh	University Research Scholarship @ Rs 18000 per month.
10.	Susan Subba (H-2020-010-D)	3 rd & 4 th	Influence of rootstocks on shoot-tip grafting of Darjeeling mandarin (<i>Citrus</i>	Dr. A. Chakraborty (Chairman) Dr. B. Chakraborty Dr. S. Gurung Dr. M. Chakraborty Dr. S. Mandal	National Fellowship for Higher Education of ST Students funded by

			<i>reticulata</i> Blanco)		Government of India @ Rs 31000 per month.
11.	Anisha Lohar (H-2021-007-D)	1 st	Not yet decided	Dr. A.Chakraborty (Chairman) (Members not yet decided)	Swami Vivekananda Merit Cum Means Scholarship funded by Go WB @ Rs. 8000 per month.
12.	Snehlata Lama (H-2021-009-D)	1 st	Not yet decided	Prof. S.Gurung (Chairman) (Members not yet decided)	In-service Candidate.
13.	Swadesh Gurung (H-2021-010-D)	1 st	Not yet decided	Prof. S.Gurung (Chairman) (Members not yet decided)	University Research Scholarship @ 18000Rs. per month.
Ph.D in Post Harvest Technology/Management					
1.	Md. Shamsher Ahmad (Inservice) (H-2018-011-D)	Awarded	Process optimization for preparation and evaluation of debittered juice from pummel (<i>Citrus grandis</i> (L.) .Osbeck)	Dr. M. P. Devi (Chairman) Dr. P. K. Paul Dr. N. Bhowmick Dr. N. Sahana Dr. M.K. Debnath	In-service Candidate
2.	Srujana Eda (H-2018-017-D)	7 th & 8 th	Evaluation of ambient temperature dryer for the dehydration of perishables.	Dr. P. K.Paul (Chairman) Dr. M. P.Devi Dr. S. Das Dr. S. Mandal Dr. N. Sahana	Swami Vivekananda Merit Cum Means Scholarship funded by Go WB @ Rs. 8000 per month.
3.	Jinnamu Aresh (H-2019-001-D)	5 th & 6 th	Effect of blanching, Chemical free treatments and surface moisture drying on qualities of minimal processed of garlic cloves	Prof. P. K. Paul (Chairman) Dr. M. P. Devi Dr. N. Bhowmick Dr. R. Chatterjee Dr. S. Mandal	Swami Vivekananda Merit Cum Means Scholarship funded by Go WB @ Rs. 8000 per month.
4.	Arpan Kabiraj (H-2021-014-D)	1 st	Not yet decided	Dr. M. P. Devi (Chairman) Members not yet decided	Swami Vivekananda Merit Cum Means

					Scholarship funded by Go WB @ Rs. 8000 per month.
5.	Sweta Malakar (H-2021-015-D)	1st	Not yet decided	Dr. P. K. Paul (Chairman) Members not yet decided	University Research Scholarship @Rs. 18000 per month.

(iii) Research Programme

(a) Departmental Research programme:

Sl. No.	Title	Associated Teacher	Status
1.	Effect of plant population and mulching on strawberry cultivation	Dr. Sarad Gurung Prof. P. K. Paul	Completed
2.	Effect of pruning and nutrient management on the performance of acid lime	Dr. S. Gurung Dr. N. Bhowmick	Completed
3.	Studies on morpho-genetic Variability of pummelo	Dr. N. Bhowmick	Continuing
4.	Impact of rejuvenation, pruning on mango	Dr. N. Bhowmick	Completed
5.	Process optimization for preparation and evaluation of de-bittered juice from pummelo	Dr. M. P. Devi	Completed
6.	Effect of nano zinc and copper on <i>Citrus medica</i>	Dr. Nilesh Bhowmick	Completed
7.	Effect of nano zinc and nano copper on litchi	Dr. Nilesh Bhowmick	Completed
8.	Performance of F ₁ guava hybrids	Dr. A. Chakraborty	Completed
9.	Propagation of kiwifruit through cuttings	Dr. N. Bhowmick	Completed
10.	Foliar spray of zinc nano particles on guava	Dr. N. Bhowmick	Completed
11.	Evaluation of ambient temperature dryer for dehydration of perishables	Dr. P. K. Paul	Continuing
12.	Tissue culture of strawberry	Dr. A. Chakraborty Dr. N. Bhowmick Dr. B. Chakraborty	Continuing
13.	Stress physiology of Darjeeling Mandarin	Dr. N. Bhowmick Dr. B. Chakraborty	Continuing
14.	Biotic and abiotic stress on strawberry	Dr. N. Bhowmick Dr. A. Chakraborty	Continuing
15.	Minimal processing of garlic	Prof. P. K. Paul Dr. M. P. Devi	Continuing
16.	Effect of vermicompost with pineapple foliage waste biochar in pineapple under ultra-high-density planting	Dr. B. Chakraborty, Dr. N. Bhowmick, Prof. P. K. Paul, Dr. A. Chakraborty Dr. M. P. Devi	Continuing
17.	Propagation techniques of Malay apple and water apple through cuttings	Dr. N. Bhowmick	Continuing
18.	Effect of fruit bunch bagging in litchi	Dr. A. Chakraborty	Continuing
19.	Effect of bio-stimulants on performance of strawberry under organic cultivation	Dr. N. Bhowmick	Continuing
20.	Efficacy of microbial isolates in removing ethylene	Prof. P. K. Paul	Continuing

21.	Quality assessment of dried chrysanthemum flower as affected by pre drying	Dr. M. P. Devi Prof. P. K. Paul	Continuing
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b)Project Handled

Sl. No.	Project Title	Sponsoring Authority	Associate Teacher
1.	Quality Control Laboratory	Ministry of Food Processing Industries, Govt of India	Prof. P. K. Paul- Principal Investigator (PI)
2.	Smart Curricula Delivery through Virtual Classrooms as Communication Linked Interface for Cultivating Knowledge and Online Courses	ICAR-National Agricultural Higher Education Project (NAHEP)-1C Innovation Grant (NAHEP/ IG-2014 /2019-20 dt 15.07. 2019 & Ref No.: UBKV /DR /1004 dt 07.11.2019)	Prof. P. K. Paul- Principal Investigator (PI) Dr. N. Bhowmick-Team Member
3.	STI Hub as a platform for socioeconomic development of target schedule caste communities of Terai and Dooars region of West Bengal	Department of Science & Technology, Govt of India, (Ref No. UBKV/DR/69 dt 11.02.2021)	Prof. P. K. Paul Dr. N. Bhowmick (Co-Investigators)
4.	Field Evaluation of Trombay Mutants and Selection and Research Activities in Agriculture & Post Harvest Technology (Crop: Pineapple & Banana)	Bhaba Atomic Research Centre (BARC) & UBKV (Ref No. UBKV/DR/622 dt 15.12.2021)	Dr. N. Bhowmick Dr. A. Chakraborty (Associate scientists)
5.	Performance of Intercropping for Profitability in Juvenile Orchard & Standardization of Vegetative Propagation Methods of Jackfruit for Quality Planting Materials	Dept. of Science & Technology and Biotechnology, GoWB [Memo no. 163 (Sanc) /ST/P/S&T/ 1 G-8/2018 dt 14.02. 2019]	Dr. N. Bhowmick- Principal Investigator (PI)
6.	Evaluation of Bio-efficacy of Plant Growth Promoters (Biozyme Tea, Biozyme G and Biozyme Power Plus L) in Tea and Paddy	Biostadt India Private Limited, Mumbai (Ref No.UBKV/DR/668 dt. 03/01/2022)	Dr. B. Chakraborty- Principal Investigator (PI)
7.	Evaluation of Bio-efficacy of Fantac Plus, Platina, Abda Drip, Abda Foliar, Abda Gold, Guard 5 and Impel on Plant Growth and Yield Parameters in Chilli, Tomato, Potato and Paddy	Coromandel International Limited, Secunderabad, (Ref No. UBKV/DR/797 dt. 18/02/2022)	Dr. B. Chakraborty- Principal Investigator (PI)
8.	To evaluate the bio-efficacy and phytotoxicity of diurex (Diuron80%WP) against weed complex in pineapple	ADAMA India Private Limited (Ref. No. UBKV/DR/398 dt 02.09.2021)	Dr. N. Bhowmick-Co- Principal Investigator (Co-PI)

c) Research findings

Mulching and plant population of strawberry (from thesis)

Wider spacing (30 × 40 cm) of strawberry led to heavier fruits and more runners, while also increasing fruit yield and various quality attributes, such as TSS, total sugar, and reducing sugar content. Black polythene mulch significantly improved fruit weight, fruit set, and various quality parameters compared to other mulching practices. It created favorable hydro-thermal soil conditions, enhancing nutrient diffusion and microbial activity, resulting in higher yield and better fruit quality.

Pruning of acid lime (from thesis)

Acid lime cv. Balaji was pruned at different heights (25cm, 50cm, 75cm) and subjected to soil drenching with paclobutrazol at varying rates. The results highlighted that medium pruning (50cm from apex) combined with paclobutrazol application at 5.0 ml/meter canopy significantly influenced morphological, reproductive, physical, chemical, and yield characteristics. This treatment reduced the number of seeds per fruit and seed weight, promoting improved fruit quality and yield. Among the different nutrient sources applied, treatment involving 20kg vermicompost + 25g Azotobacter as soil application, along with ZnSO₄, Borax, and CuSO₄ as foliar spray, yielded the best results in terms of morphological, reproductive, physical, chemical and yield parameters, while also reducing the number of seeds per fruit and seed weight. Medium pruning (50cm from apex) combined with paclobutrazol application at 5 ml/canopy and 20kg vermicompost + 25g Azotobacter (as soil application) + ZnSO₄, Borax, CuSO₄ (as foliar spray) represent optimal practices for acid lime cultivation in the *Terai* zone of West Bengal, leading to improved growth, yield, and fruit quality.

Performance of guava hybrids (from thesis)

Comparative study on morphology and biotic stress in F 1 and their parent of guava was evaluated. Result revealed that tree attitude of branch was found erect to spreading. Young shoot colour was found green with red stalk in all F 1 hybrids and also in two of its parents whereas other showed green colour of stem. Young leaf anthocyanin coloration found present in all F 1 hybrids whereas it was absent in all the parents. Fully developed leaf shape was observed oblong, trullate and rounded. Leaf twisting was absent in all treatments. The tree height varied among different treatments ranges from 1.87 m to 3.55 m. Maximum leaf length and width was in Doodh Khaja. TSS was found maximum 11.03° B in Baruipur × Red Fleshed. The highest acidity was recorded 0.36% in Baruipur × Red Fleshed). Total sugar percentage was 7.11% in Baruipur × Red Fleshed. Reducing sugar 4.90% in Baruipur × Red Fleshed). Maximum ascorbic acid content was found 143.00 mg/100g pulp in L-49 × Red Fleshed. The fruit canker and wilt were found serious problem in L-49 while percent of disease incidence was minimum in rest of the treatments whereas the incident of the anthracnose was not found so far in any of the treatments. In most of the cases F 1 hybrid showed a better result as compare to parents.

Nano particles on guava (from Thesis)

The comparative efficacy of nano zinc oxide over traditional Zn-EDTA and ZnSO₄ (Zn NP at 25, 50, 75, 100 µg/mL, Zn-EDTA @ 1.0%, ZnSO₄ @ 1.0% and water spray) on flowering, fruiting characteristics Guava cv. L-49 plants having 4×4 m spacing were assessed. It was found that the application of foliar spray resulted minimum days for emergence of flower bud (23.89 days) with ZnNP @ 25 µg mL, whereas, increased flowering duration (44.67 days), initial fruit set

number in (117.00) and yield (10.91kg/plant) was noticed with ZnNP @ 75 µg mL. Application of zinc nano particles also improved the fruit physio-chemical attributes and uptake of nutrients. It is concluded from the present experiment that foliar application nano zinc oxide at 75 µg mL and 100 µg mL increased flowering, fruiting characteristics and biochemical properties of guava.

Rejuvenation of mango (from Thesis)

The performance of various mango cultivars after rejuvenation were assessed to examine the impact of shoot pruning and paclobutrazol on flowering and fruiting, as well as the study of insect-pest incidence on rejuvenated and pruned plants. Variations in shoot emergence time and number of shoots among mango cultivars, with Mallika and Himsagar showing promising results after rejuvenation. Enzymatic activities improved after rejuvenation, particularly in Himsagar and Mallika. Paclobutrazol and shoot pruning significantly influenced flowering and fruiting characteristics, with early flowering in Bangalora after paclobutrazol treatment. Disease severity varied among cultivars, with Mallika being more susceptible to anthracnose. Paclobutrazol reduced pest and disease infestation, with temperature and pruning date affecting infestation levels.

Process optimization & De-bittering of pummelo juice (from Thesis)

Different methods of juice extraction were tested, and the most effective method involved dipping the fruit in hot water at 80°C for 5-10 minutes, followed by peeling and juice extraction, reducing bitter compounds by 50-75%. Various spice extracts (turmeric, ginger, clove) were applied, with 6% turmeric extract proving the most effective in reducing bitterness. An adsorbent, Amberlite XAD-16 resin, was used for debittering through a D-optimal mixture design, resulting in the reduction of bitter compounds (naringin by 40% and limonin by 88%) while improving sensory properties. The optimized combination of Amberlite XAD-16 resin treatment was used to prepare a fruit syrup following FSSAI specifications. The syrup remained stable for six months, with a gradual increase in bitterness but acceptable organoleptic properties.

Various pummelo-based squash formulations were assessed for their physico-chemical and sensory properties during a 6-month storage period at room temperature. The study found that pummelo-blended squash remained stable and organoleptically acceptable throughout this period. Notably, the blend of 150ml pummelo juice, 100ml beetroot juice, and 750ml sugar syrup maintained the highest quality parameters, followed closely by the blend of 150ml pummelo juice, 100ml beetroot juice, 375ml sugar syrup, and 375ml stevia syrup.

Propagation techniques of Kiwifruit (from Thesis)

An experiment was conducted to study the effect of girdling, etiolation and growth promoter (IBA) on performance of kiwifruit cutting at Kalimpong. Girdling + etiolation + IBA @5000 ppm showed better response for number of days taken for sprouting (77 days), length of the sprout (2.07 cm), sprouting percentage (68.33%), number of roots of cuttings (5), rooting percentage (68.33 %), number of days taken for rooting (87.33 days), longest root length (5.90 cm), survival percentage (64.53 %), mortality rate (46.02%) and etiolation + IBA@ 4000 ppm was effective in number of leaves per shoot (5.67).

Post-harvest losses of banana (from Thesis)

The potential of heat treatment (Hot water dipping) in combination with Pulse duration on the banana cv Grand Naine were assessed. For most of the parameters studied, 40°C recorded a better result except for titratable acidity and physiological loss in weight. 1 minute dipping was found to perform better than 2 minute dipping throughout the storage duration. On sixteenth day after storage, 1 minute dipping caused significantly more physiological loss in weight than 2 minute dipping. Single pulse was found to be better than two pulse or four pulse.

d) Developmental Programme:

Sl. No.	Title	Associated Teacher	Status
1.	Development and maintenance of different pineapple varietal block	Dr. N. Bhowmick	Continuing
2.	Maintenance of Assam Lemon block and propagation practices for raising of saplings	Dr. N. Bhowmick	Continuing
3.	Maintenance of Litchi Varietal block and propagation practices for raising of saplings	Dr. N. Bhowmick	Continuing
4.	Collection of different banana germplasm and establishment of banana block	Dr. N. Bhowmick	Continuing
5.	Maintenance of guava varietal block and propagation practices for raising of saplings	Dr. N. Bhowmick	Continuing
6.	Maintenance of mango mother block	Dr. N. Bhowmick	Continuing
7.	Maintenance of mango varietal block	Dr. N. Bhowmick Dr. A. Chakraborty	Continuing
8.	Maintenance of mother block of litchi and guava for raising of saplings	Dr. N. Bhowmick Dr. A. Chakraborty	Continuing
9.	Maintenance of citrus rootstock, water apple orchard	Dr. M. Preema Devi	Continuing
10.	Development and maintenance of jackfruit genotypes block	Dr. N. Bhowmick Dr. A. Chakraborty Dr. M. Preema Devi	Completed

5) PUBLICATIONS

da) Book Published

1. Kondle, R., Gurung, S., Bhowmick, N. (2021). Essence of fruit science. Scripown Publication, New Delhi, ISBN: 978-93-90833-06-01

b) Book chapter

1. Pareek, O. P., Sharma, K. M., **Bhowmick, N.** (2021). Chapter-Date palm. Fruits: Tropical and Sub-tropical (vol-4), Eds. Bose, T. K., Parthasarathy, Mitra, S. K., Chakraborty, I., Ghosh, B., Sanyal, D. ISBN: 9789390435463. Daya Publishing House (A division of Astral International Pvt. Ltd.), New Delhi-110002
2. Bajpai, P. N., Chaturvedi, O. P., **Bhowmick, N.**, Sharma, K. M., Chakraborty, I.(2021). Chapter-Syzygium. Fruits: Tropical and Sub-tropical (vol-4), Eds. Bose, T. K., Parthasarathy, Mitra, S. K., Chakraborty, I., Ghosh, B., Sanyal, D. ISBN: 9789390435463. Daya Publishing House (A division of Astral International Pvt. Ltd.), New Delhi-110002

e) Research Paper

1. Ahmed, M. S., Devi, M. P., Paul, P. K., Bhowmick, N. (2021). Study on juice extraction methods for enhancing juice yield and reducing bitterness in pummelo. *The Pharma Innovation Journal*, 10(11): 393-396 [NAAS rating. 5.23]
2. Dey, A. N., Bhowmick, N., Chakraborty, A., Dey, K and Ghosh, A. (2021). Influence of different pre-sowing treatments on germination potential of Bakul (*Mimusops elengi* L.). *The Pharma Innovation Journal*, 10(4): 236-238 [NAAS rating. 5.23]
3. Parameswar, P., Bhowmick, N., Sahoo, S (2022). Susceptibility of different rejuvenated mango cultivars to leaf cutting weevil (*Deporaus marginatus*). *Agricultural Mechanization in Asia, Africa and Latin America*, 53(5):7589-7594 [NAAS Rating:6.14]
4. Rai, A., Dey, A. N., Bhowmick, N., Panda, M. R., Dinesha, S., Sarkar, B. (2022). Impact of growth hormones on vegetative propagation of *Elaeocarpus ganitrus* Roxb. *Environment Conservation Journal*, 23 (1&2): 164-171 [NAAS rating. 5.66]
5. Ghising, K., Dey, A. N., Chakravarty, S., Panda, M. R., Bhowmick, N., and Mukhopadhyay, D. (2022). Growth performance of teak (*Tectona grandis* Linn.) stump under different growing media in nursery. *Biological Forum – An International Journal*, 14(3): 322-330

6) EXTENSION PROGRAMME

(a) Training/Demonstration Programme

Sl. No.	Subject	Period	Venue	Organizer	Resource Person
1.	Farmers' Training cum Input Distribution programme	20.07.2021	Samuktala, Alipurduar	TSP of AICRP-Biological Control (Ref No. UBKV/AICRP-BC/179 dt 16.07.2021)	Dr. Nilesh Bhowmick
2.	DAESI courses Problem & Prospects of fruit cultivation in Cooch Behar district	14.09.2021	Cooch Behar KVK	Cooch Behar KVK, UBKV (Ref No. KVK/ COB/ 2021-22/ DAESI/ 4th Batch-17 dt 13.09.2021)	Dr. Nilesh Bhowmick
3	Residential Training for the CEOs of FPC (Topic: Status of fruit crop cultivation)	13.02.2022	Satmile Satish Club o Pathagar	NABARD & Satmile Satish Club O Pathagar (POPI)	Dr. Nilesh Bhowmick
4	Residential Training for the CEOs of FPC (Topic: Post Harvest Management of Horticultural Crops)	13.02.2022	Satmile Satish Club O Pathagar	NABARD & Satmile Satish Club O Pathagar (POPI)	Dr. M. P. Devi

5.	Organic farming and supply chain management	16.02.2022	Faculty of Horticulture , UBKV	UBKV under ICAR-SC-SP Plan (UBKV/HORT/PPH T/250(17) dt 08.02.2022)	Dr. Nilesh Bhowmick
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(b) Farmers Advisory Services Regarding Agricultural Tips

Sl. No.	Name and address of the farmers	Problem addressed	Date	Associated Teacher
1.	Md Abdul Kalam Mian, C/O-Dhuladdin Mian, Sauderboss, PO-Ghkadanga, Dist-Cooch Behar, Mob-9593879410	Improved production technology of ber	05.10.2021	Dr. Nilesh Bhowmick
2.	Manoranjan Sarkar, Vill-Uttar Chikliguri, PO-Paschim Khalisabari, Bhatibari, Dist-Alipurduar, Mob:3434712314	Improved production technology of papaya	07.10.2021	Dr. Nilesh Bhowmick
3.	Sukumar Majumdar, Vill-Sisabguri, PO-Dewanhat, Dist-Cooch Behar, Mob:9733192042	Improved production technology of papaya	25.10.2021	Dr. Nilesh Bhowmick
4.	Swapan Shit, Vill-Sahebpota, PO-Shilbarihat, Dist-Alipurduar, Mob:-7718641636	Improved cultivars and management of ber	07.12.2021	Dr. Nilesh Bhowmick
5.	Ripan Roy, Vill-Rashidanga Part-I, PO- Rashidanga Part-II, Cooch Behar-I, PIN-736170, Mob:7865056938	Production problems of Dragon fruit	16.12.2021	Dr. Nilesh Bhowmick
6.	Dipayan Sarkar, Vill+PO-Dakshin Dhalkar, PS-Samuktala, Dist-Alipurduar-736208, Mob:-7098264552	Burmese grape cultivation	29.12.2021	Dr. Nilesh Bhowmick
7.	Mithun Dutta, Vill+PO- Dakshin Dhalkar, PS-Samuktala, Dist-Alipurduar-736208	Problems and prospects of Mandarin orange and Sweet Orange (Malta) cultivation	29.12.2021	Dr. Nilesh Bhowmick
8.	Dinabandhu Barman, Vill-Ruidanga, PO-Atpukuri Nayahat, PS-Ghoksadanga, PIN-735211, Mob:8617230408	Diseases in banana cultivation	06.01.2022	Dr. Nilesh Bhowmick
9.	Bakul Das, Vill-Ruidanga, PO-Atpukuri Nayahat, PS-Ghoksadanga, PIN-735211, Mob:6294704400	Varieties of banana	06.01.2022	Dr. Nilesh Bhowmick
10.	Kasshimuddin, Vill-Dhaloguri, PO-Khattimari, PS-Ghoksadanga, Dist-Cooch Behar-736171, Mob-9002503184	Banana disease problems	23.03.2022	Dr. Nilesh Bhowmick

7) OTHER ACTIVITIES:

a) Members of different committee, Assignment, Additional responsibility

Sl No.	Committee/Assignment	Teacher associated
1.	Dean, Faculty of Horticulture, UBKV	Prof. P.K. Paul
2.	Registrar, UBKV (In-charge)	Prof. P.K. Paul
3.	Head, Dept of Pomology & Post Harvest Technology, UBKV	Dr. N. Bhowmick
4.	Member, Faculty Council, Faculty of Horticulture	Dr. N. Bhowmick
5.	Member, Post Graduate Committee	Dr. N. Bhowmick
6.	Expert Member, Monitoring Committee of Dakshin Dinajpur KVK, Malda KVK for a period of two years (Ref No. DEE/UBKV/20-21/74 dt 16.07.2020)	Dr. N. Bhowmick
8.	Convenor, Faculty Curriculum Committee (Ref No. 2161 dt 18.01.2018)	Dr. N. Bhowmick
9.	Member, Special Study & Coaching, Pundibari Campus Sub-Cell (Ref No. 388/D-F/Ag-UBKV dt 28.10.16)	Dr. N. Bhowmick
10.	Member, Editorial & Publishing Committee, <i>Farmers' Bulletin (Uttorer Krishikatha)</i> (Notification No. DEE/UBKV/13-14/58 dt 19.9.2013, Ref No. DEE/UBKV/18-19/24 dt 23.04.2018)	Dr. N. Bhowmick
11.	Member for Integrated Farming System Unit, UBKV (email from the Dean, Faculty of Horticulture dt 25.08.2021)	Dr. N. Bhowmick
12.	Member, Internal Complaint Committee (ICC) (Ref No. 1251/UBKV/Est dt 09.03.2022)	Dr. N. Bhowmick
14.	Member, Commercial Nursery (Ref. No. 43 /Hort/UBKV dt 17.05.2021)	Dr. N. Bhowmick
15.	Member, Enquiry Committee for the liabilities of the Mess Committee of the PCM Hostel (Ref No. 177/UBKV/Est dt 10.07.2021)	Dr. N. Bhowmick

b) Resource person in Seminar/Symposium/Conference/Workshop

	Subject	Period	Venue	Organizer	Responsibility	Resource Person
1	National Seminar on Fruit Production on Eastern Tropical Region of India	24-26.03.2022	Virtual	ICAR-IIHR-CHES	Rapouterr	Dr. Nilesh Bhowmick

c) Participation in Seminar/Symposium/Conferences/Workshop

Sl. No.	Subject	Period	Venue	Organizer	Title of the Paper presented	Associated Teacher
1.	National Seminar on Fruit Production on Eastern Tropical Region of India	24-26.03.2022	Virtual	ICAR-IIHR, CHES, Odisha	Impact of pruning on flowering, fruiting characteristics of guava	Dr. Nilesh Bhowmick
2.	National Webinar on "Indian Jujube"	14 June, 2021	Virtual	ICAR-Central Institute for	Attended	Dr. Nilesh Bhowmick

				Arid Horticulture , Bikaner- 334006, Rajasthan		
Participation by the students						
1.	Canopy architechture management in perennial commercial horticultural crops	19 th to 20 th July,2021	Online	UHS, Bagalkot	-	Sanasam Angousana
2.	National workshop and stakeholder Meet on Medicinal Plants in Eastern India: Constraints and Prospects	6 th Aug,2021	Online	ICAR- Research Complex for Eastern Region,Patna, Bihar	-	Sanasam Angousana
3.	Advancement in fruit production technologies:Present situation and future stratigies	14 th Sept,2021	Online	Dept. of Fruit Science,BCKV,Mohanpur	-	Chinmoy Mondal
4.	3 rd International Conference(Hybrid Mode) on Food, agriculture and Innovations	24 th -26 th Dec,2021	Hybrid	ICFAI	Effect of secondary hardening media on field survivability and growth of in-vitro banana plants cv. Grand Naine	Novin Chamling
5.	National Seminar on Fruit Production in Eastern Tropical Region of India	24 th to 26 th March,2022	ONLINE	ICAR-CHES, Bhubaneswar	-	Novin Chamling

8) OTHER ACADEMIC ACTIVITIES:

a) External Examiner/Paper Setter/Moderator/Evaluation of Answer Script

Sl. No.	Name of the Course	University	Associate Teacher
1.	Comprehensive Ph.D. Viva-Voce Examination	Dept. of Fruit Science & Horticultural Technology, College of Agriculture, Odisha University of Agriculture & Technology on	Dr. Nilesh Bhowmick

		16.02.2022 (Ref No. 101 dt 04.02.2022)	
2.	External Examiner of P G Courses (HFS: Biodiversity and conservation of Fruit Crops)	Dept of Horticulture, NEHU, Tura Campus (Ref No: TC/HORT./2020-21/493 dt 04.09.2021)	Dr. Nilesh Bhowmick

b) Thesis Evaluation:

Sl. No	Name of Student	Thesis Title	Degree	University	Associated Teacher
1.	Megha Raghavan [02H(P)18]	Evaluation of Genetic Diversity of Mandarin (<i>Citrus reticulata</i> Blanco) from different parts of North East India using morphological and SSR markers	Ph.D. in Fruit Science	College of Horticulture and Forestry, Central Agricultural University, Pasighat, Arunachal Pradesh (Ref No. CHF / CAU / ACAD / External / (Ph.D.) /2016/ 4596 dt 29.01.2022)	Dr. Nilesh Bhowmick
2.	Oyinti Megu U-17-AR-01-005-D-H-003	Effect of plant growth regulators and micro nutrients on fruiting and quality attributes of litchi (<i>Litchi chinensis</i> Sonn)	Ph.D. in Fruit Science	College of Horticulture and Forestry, Central Agricultural University, Pasighat, Arunachal Pradesh (Ref No. CHF/ CAU/ ACAD /External / (Ph.D.)/2016/105 dt03.04.2021)	Dr. Nilesh Bhowmick
3.	Sanabam Indira Devi (M.Sc.)	Effect of NAA & micronutrients on flowering, fruit setting, yield and quality of litchi (<i>Litchi chinensis</i> Sonn.) cv. Muzaffarpur	M.Sc.	CAU, Pasighat (Ref No. CHF /CAU /ACAD /TE(PG)(H)/2017/1601 dt 10.09.2017	Dr. Nilesh Bhowmick
4.	Jaksam N. Marak	Effect of plant extracts on germination and growth of rough lemon (<i>Citrus jambhiri</i> Lush) seedlings	M.Sc.	NEHU, Tura (Ref No./TC/Hort./2021 dt 24.09.2021)	Dr. Nilesh Bhowmick
5.	Lakshmi K V (UHS19PGM 1190)	Standardization of grafting time and propagation environment in custard apple (<i>Annona squamosa</i> L.) cultivars	M.Sc	University of Horticultural Sciences, Bagalkot, Karnataka (email on 23.11.2021)	Dr. Nilesh Bhowmick

c) Thesis viva-voce

Sl. No	Name of Student	Thesis Title	Degree	University	Associated Teacher
1.	Jaksam N. Marak	Effect of plant extracts on germination and growth of rough lemon (Citrus jambhiri Lush) seedlings	M.Sc.	NEHU, Tura (Ref No./TC/Hort./2021 dt 24.09.2021) on 27.09.2021	Dr. Nilesh Bhowmick

d) Member of the Advisory Committee (other Department):

Sl. No.	Name of Student	Course	Thesis Title	Department/ Discipline	Associated Teacher
1.	Suman Natta (A-2017-028-D)	Ph.D.	Evaluation and characterization of nutritional components of jackfruit (<i>Artocarpus heterophyllus</i>) for potential applications as functional food	Biochemistry	Dr. N. Bhowmick
2.	Fouzia Bari (A-2017-005-D)	Ph.D.	Screening of different banana cultivars against banana scare beetle.	Agricultural Entomology	Prof N. Bhowmick
3.	Samima Sultana (H-2018-014-D)	Ph.D.	Impact of arecanut based cropping system on growth, yield of different subsidiary crops and carbon sequestration in north-eastern foot hills of WB	Plantation Crops and Processing	Dr. N. Bhowmick
4.	Sandeep Chetri (H-2018-015-D)	Ph.D.	Studies on the performance of four varieties of arecanut (<i>Areca catechu</i>) under organic multi-storied cropping system	Plantation Crops and Processing	Dr. N. Bhowmick
5.	Eggadi Ramesh (H-2018-008-D)	PhD.	Standardization of Integrated Nutrient Management and Application of Bio-Stimulants for Growth, Yield and Post Harvest Quality of Tomato	Vegetable Science	Dr. M. P. Devi
6.	Kheyali Ghosh (H-2018-010-D)	Ph.D.	Studies on growth, yield and shelf-life of okra (<i>Abelmoschus esculentus</i> (L.) Moench) as influenced by date of sowing, spacing and packages	Vegetable Science	Prof. P. K. Paul Dr. M. P. Devi
7.	Toko Yarin (H-2019-012-D)	Ph.D.	Effect of intercropping on growth and latex physiological parameters of different rubber (<i>Hevea brasiliensis</i> Mull, Arg.) clones at juvenile phase in WB	Plantation Crops and Processing	Dr. N. Bhowmick

8.	Md. Saheen Akhtar (A-2020-002-D)	Ph.D	Fruit production and processing potential in India with special reference to Mango	Agricultural Economics	Dr. N. Bhowmick
9.	Manish Roy (H-2021-04-D)	Ph.D.	Nutrient and anti-nutrient analysis of some important wild edible plants of forest dependent communities in Jaldapara National Park	Forestry	Dr. N. Bhowmick
10.	Dharmaraj Saren (A-2019-010-M)	M.Sc.	Studies on Cicadellid hopper diversity and their population behaviour associated with mango ecosystem in sub-Himalayan West Bengal	Agricultural Entomology	Dr. N. Bhowmick
11.	Umrasong Mog (H-2020-09-M)	M.Sc.	Standardization of pre-germination treatment for germination and growth behavior of <i>Ailanthus grandis</i> Prain and <i>Sterculia alata</i> Roxb.	Forestry	Dr. N. Bhowmick
12.	Trinayane Sharma (H-2020-016-M)	M.Sc.	Studies on flowering and fruiting behaviour of cashew (<i>Anacardium occidentale</i> L.) in Terai region of West Bengal	Plantation Crops & Processing	Dr. N. Bhowmick
13.	Mallikarjun Purgunde (H-2020-002-M)	M.Sc.	Influence of cultivars and organic nutrient sources on china aster (<i>Callistephus chinensis</i> L. Nees) in terai region of West Bengal	Floriculture, Medicinal and Aromatic Plants	Dr. B. Chakraborty

e) Reviewer of Journal

Sl.No.	Topic	Name of journal and year	Associated Teacher
1.	Role of potassium on production and quality of fruit crops-a review	Agricultural Reviews (31.12.2021)	Dr. Nilesh Bhowmick
2.	Application of essential oils for maintaining postharvest quality of 'Rongrien' rambutan fruit	Scientia Horticulturae (HORTI31743 25.05.2021)	Dr. Nilesh Bhowmick
3.	Effect of Branch Bending Time on Induction of Shoot and Flower Bud, Productivity and Quality of "Sardar" Guava (L-49)	Journal of Crop and Weed (MS1489-30-08-21) submitted on 01.11.2021 via email	Dr. Nilesh Bhowmick

f) Internal Question Setter (Ref. No. UBKV/Hort./PPHT 122/2021-22 dt 01.10.2021)

Sl. No.	Associated Teacher	Subjects
1.	Dr. Nilesh Bhowmick	FSC 504, FSC 603
2.	Dr. Aditi Chakraborty	FSC 504, FSC 505, FSC 603
3.	Dr. Binayak Chakraborty	FSC 505, FSC 603

10) LIFE MEMBERSHIP OF PROFESSIONAL SOCIETIES/JOURNALS

Sl. No.	Name of the Journal/Society	Address	Teacher
1.	Society for Advancement of Horticulture (The Horticultural Journal)	B.C.K.V., Mohanpur, Nadia, WB	Dr. N. Bhowmick
2.	Crop and Weed Science Society (Journal of Crop and Weed)	B.C.K.V., Mohanpur, Nadia, WB	Dr. N. Bhowmick Dr. A. Chakraborty
3.	Horticulture Society of India (Indian Journal of Horticulture)	ICAR-I.A.R.I., New Delhi	Dr. N. Bhowmick
4.	Society Promotion of Horticulture (Journal of Horticultural Science)	ICAR-I.I.H.R., Bengaluru	Dr. N. Bhowmick
5.	Indian Society for Plant Physiology (Indian Journal of Plant Physiology)	ICAR-I.A.R.I., New Delhi	Dr. N. Bhowmick
6.	Forum of Scientists, Engineers and Technologists (Thought)	Kolkata	Dr. N. Bhowmick
7.	Fruit Science Society of Bangladesh	Bangladesh Agricultural University, Mymensingh, Bangladesh	Dr. N. Bhowmick
8.	Cooch Behar Association for Cultivation of Agricultural Sciences (Journal of Agricultural Technology)	U.B.K.V.	Dr. P.K.Paul Dr.N. Bhowmick Dr. M. Preema Devi Dr. A. Chakraborty
9.	Association of Food Scientist and Technologist	CFTRI, Mysore	Dr. M. Preema Devi Dr. P.K.Paul

PHOTO GALLERY



FPC-CEO training programme at Satmile Satish Club-O-Pathagar, Mathabhanga



Dr. Nilesh Bhowmick along with the students after conduction of Ph.D> comprehensive viva-voce programme, Dept. of Fruit Science & Horticultural Technology, College of Agriculture, Odisha University of Agriculture & Technology

Photograph related with Thesis work of the M. Sc. Students

Aamir Humayun



Sanasam Angousana



Sudarshana Bhujel



Rajesh Das





Viswanath K. E.



Swadesh Gurung



Damonhi Phyllei



Sweta Malakr



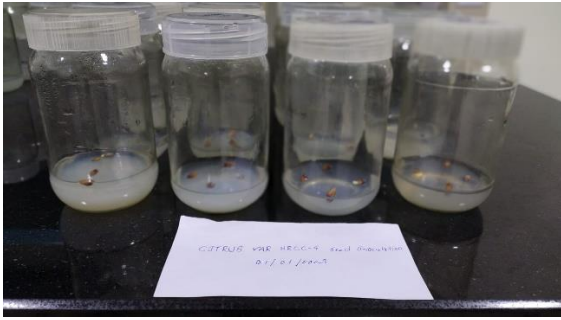
Photograph related with Thesis work of the Ph.D. Students

Saidiksha Subba



Susan Subba





Vivek Kumar

