

ANNUAL *Report* 2020-21



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

Annual Report

2020-21



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

PREFACE

I am delighted to introduce the Preface for the Annual Report of the Department of Pomology and Postharvest Technology for the fiscal year 2020-21. This report provides a comprehensive overview of our department's endeavors in teaching, research, and various activities. Situated in the heart of West Bengal, particularly its northern region, our department enjoys the unique advantage of being in a horticultural paradise, with vast expanses of fertile land and a diverse range of agro-climatic conditions that are ideal for cultivating a wide variety of subtropical fruits. However, despite these favorable conditions, the production of most fruits remains disappointingly low. Only a handful of commercially viable varieties thrive, primarily due to challenges such as nutrient deficiencies, pests, diseases, and suboptimal management practices.

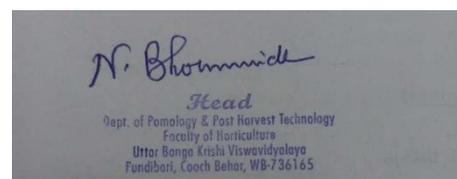


In response to these challenges, our department has taken proactive steps to expand the cultivation of subtropical fruit crops. Our goals include sharing advanced production techniques, implementing integrated nutrient management strategies, introducing and assessing new fruit varieties, reducing postharvest losses, and standardizing innovative postharvest technologies. All of these efforts are aimed at increasing both fruit production and productivity while extending the shelf life of harvested fruits.

Recognizing the potential of fruit cultivation and efficient postharvest handling to provide farmers with better returns per unit of land, our department is well-positioned to make significant contributions to food security, nutrition, employment opportunities, and poverty alleviation. Throughout our twenty-year journey, we have consistently maintained excellence in horticultural education, research, and extension activities.

Creating a conducive environment for academic excellence, research advancements, and the effective dissemination of technology within our department is crucial for achieving our ambitious goals. While we acknowledge the challenges, especially the resource limitations we face today, we have confidence that, working together, we can overcome these obstacles and lead our department to even greater achievements.

In the face of COVID-19 challenges, I would like to convey my heartfelt gratitude to our committed academics, hardworking staff, and students, whose unwavering commitment was vital in completing academic and research initiatives on time. I express my heartfelt appreciation for their joint efforts and wish each member of our academic family and their loved ones continued good health and happiness.

A rectangular stamp containing a handwritten signature in blue ink that reads "N. Bhowmick". Below the signature, the text "Head" is written in a decorative font. Underneath, the following text is printed in a smaller font: "Dept. of Pomology & Post Harvest Technology", "Faculty of Horticulture", "Uttar Banga Krishi Viswavidyalaya", and "Fundibari, Cooch Behar, WB-736165".

N. Bhowmick
Head
Dept. of Pomology & Post Harvest Technology
Faculty of Horticulture
Uttar Banga Krishi Viswavidyalaya
Fundibari, Cooch Behar, WB-736165

(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	11.02.2021	7001289077	--

3) STUDENT INTAKE CAPACITY

Under Graduate Programme

a) **B.Sc. (Hort.) Hons:-**Twenty 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 Dr. S. Sikder (Dept. of VSC)
2.	PPT 102	Plant Propagation & Nursery Management	1+1	Dr. A. Chakraborty	Dr. B. Chakraborty
3.	PPT 151	Orchard & 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 Fruit Crops	1+1	Dr. B. Chakraborty	Dr. A. Chakraborty
6.	PPT 251	Tropical & Sub-Tropical Fruits	3+1	Dr. A. Chakraborty	Dr. N. Bhowmick Dr. B. Chakraborty
7.	PPT 252	Production Technology of Fruit & Plantation Crops	1+1	Dr. B. Chakraborty	Dept. of PCP
8.	PPT 301	Post Harvest Management of Horticultural Crops	2+1	Dr. M. Preema Devi	Dr. P. K. Paul
9.	PPT 351	Breeding of fruits and Plantation Crops	2+1	Dr. N. Bhowmick	Dr. A. Chakraborty Dept. of PCP
10.	PPT 352	Principles of Food Science and Nutrition	2+0	Dr. P. K. Paul	Dr. M. Preema Devi
11.	PPT 353	Post Harvest Management & Value Addition of Fruits & Vegetables	1+1	Dr. M. Preema Devi	Dr. P. K. Paul
12.	ELC 352	Food Safety and Standards (Elective Course)	2+1	Dr. M. Preema Devi	Dr. H. S. Konar (F/Tech), Dr. Ayon Roy (Plant Pathology)
13.	PCP 351	Processing of Horticultural Crops (Offered from Plantation Crops & Processing)	1+2	Teachers of PCP	Dr. M. Preema Devi
14.	PCP 151	Growth and development of Horticultural Crops (Offered from Plantation Crops & Processing)	1+1	Teachers of PCP	Dr. A Chakraborty
15.	HOR 152	Principles of Horticultural Crops and Plant protection (Offered from Faculty of Technology)	1+1	Offer Dept. VSC	Dr. M. Preema Devi

(b) Courses Offered in PG level

Sl. No	Course No	Course Title	Credit	Course Leader	Associated teachers
1.	FSC 501	Tropical & Subtropical Fruit Production I	2+1	Dr. N. Bhowmick	Dr. A. Chakraborty
2.	FSC 502	Tropical & Subtropical Fruit Production II	2+1	Dr. A. Chakraborty	Dr. B. Chakraborty
3.	FSC 503	Temperate Fruit Production Technology	2+1	Dr. B. Chakraborty	Dr. N. Bhowmick
4.	FSC 505	Propagation and Nursery management of Fruit Crops	2+1	Dr. A. Chakraborty	Dr. B. Chakraborty
5.	FSC 506	Growth & Development of Fruit Crops	2+1	Dr. A. Chakraborty	Dr. N. Bhowmick
6.	FSC 507	Canopy Management in fruit crops	1+1	Dr. A. Chakraborty	Dr. B. Chakraborty
7.	FSC 591	Masters' Seminar-I	1+0	Dr. N. Bhowmick (Seminar Leader)	***
8.	FSC 592	Masters' Seminar-II	0	Dr. N. Bhowmick (Seminar Leader)	***
9.	PHT 501	Post Harvest Physiology and Biochemistry of Fruits and Vegetables	2+1	Dr. M. P. Devi	Dr. P. K. Paul
10.	PHT 502	Post Harvest Management of Fruits & Vegetables	2+1	Dr. P. K. Paul	Dr. M. Preema Devi
11.	PHT 503	Principles and methods of fruits and vegetable processing	2+1	Dr. M. P. Devi	Dr. P. K. Paul
12.	PHT 505	Packaging of fresh and processed Horticultural Produce.	1+1	Dr. M. Preema Devi	Dr. H. S. Koner
13.	PHT 506	Post Harvest Technology of ornamentals	1+1	Dr. M. Preema Devi	Dr. A. M. Khan (FLA)
14.	PHT 507	Processing of Plantation, Spices, Medicinal and Aromatic Plants	1+1	Dr. M. Preema Devi	Dr. S. Das (PSMA)
15.	PHT 508	Spoilage of fruits, vegetables and processed products	2+1	Dr. P. K. Paul	Dr. M. Preema Devi, Dr. Anamika Debnath (PPA)
16.	PHT 509	Drying and Dehydration Technology	1+1	Dr. M. P. Devi	Dr. H. S. Koner

17.	PHT 591	Credit Seminar	1+0	Dr. N. Bhowmick (Seminar Leader)	***
18.	PHT 592	Masters' Seminar	0	Dr. N. Bhowmick (Seminar Leader)	***
19.	FSC 601	Breeding of Fruit Crops	2+1	Dr. B. Chakraborty	Dr. N. Bhowmick Dr. A. Chakraborty
20.	FSC 602	Advances in production of fruit crops - I	2+1	Dr. A. Chakraborty	Dr. N. Bhowmick Dr. B. Chakraborty
21.	FSC 605	Commercial Fruit Nursery	2+1	Dr. A. Chakraborty	Dr. B. Chakraborty
22.	FSC 691	Doctoral Seminar-I	0	Dr. N. Bhowmick (Seminar Leader)	***
23.	FSC 692	Major field of study	0	Dr. N. Bhowmick (Seminar Leader)	***
24.	FSC 693	Doctoral Seminar-III	0	Dr. N. Bhowmick (Seminar Leader)	***
25.	PHT 601	Advances in Postharvest handling of perishables	2+1	Dr. M. Preema Devi	Dr. P. K. Paul
26.	PHT 602	Advances in Postharvest physiology	2+0	Dr. M. Preema Devi	Dr. P. K. Paul
27.	PHT 604	Fruits and Vegetables Waste Management	2+0	Dr. M. Preema Devi	Dr. P. K. Paul
28.	PHT 605	Bioactive compounds in Horticultural Produce	2+1	Dr. P. K. Paul	Dr. M. Preema Devi
29.	PHT 691	Doctoral Seminar-I	0	Dr. N. Bhowmick (Seminar Leader)	***

(c) Students of the Department:

M.Sc Students

Sl No.	Name	Semester	Thesis title	Advisory Committee	Scholarship enjoyed
M.Sc (Hort.) in Fruit Science					
1	Deepak. S. Kore (H-2018-007-M)	Awarded	Effect of mutagen on seed germination and seedling growth behavior of acid lime (<i>Citrus aurantifolia</i> Swingle.)	Dr. A.Chakraborty (Chairman) Dr. N. Bhowmick Prof. P.K. Paul Dr. A. Kundu Prof. A. Ghosh	University Merit Scholarship @ Rs. 600 per month.
2	Saidiksha Subba (H-2018-020-M)	Awarded	Flowering, fruiting	Dr. N. Bhowmick (Chairman)	University Merit Scholarship @

			characteristics and response of girdling on yield attributes of litchi (<i>Litchi chinensis</i> Sonn.)	Dr. A. Chakraborty Dr. P. Dutta Prof. P.S. Medda	Rs.600 per month.
3	Swadesh Gurung (H-2019-015-M)	3 rd & 4 th	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.
4	Viswanatha K.E (H-2019-017-M)	3 rd & 4 th	Effect of foliar spray of Zinc-nano-particle on guava (<i>Psidium guajava</i> L.)	Dr. N. Bhowmick (Chairman) Dr. A. Chakraborty Prof. D. Mukhopadhyay Prof. A. Ghosh, Dr. S. Mandal	National Talent Scholarship funded by ICAR @ Rs.5000 per month.
5	Zigme Wangchuk Sherpa (H-2019-018-M)	3 rd & 4 th	Comparative study on morphology and biotic stress in F ₁ and their parent of guava (<i>Psidium guajava</i> L.)	Dr. A.Chakraborty (Chairman) Dr. N. Bhowmick Prof. A.N. Dey Prof. A.Sarkar Dr. S. Khalko.	University Merit Scholarship @ Rs.600 per month.
6	Kavitha Singh (H-2020-010-M)	1 st	Not Yet Decided	Prof. (Dr). N. Bhowmick (Chairman) Dr. A. Chakraborty Dr. B. Chakraborty Dr. M.P. Devi	University Merit Scholarship @ Rs.600 per month.
7	Rajesh Das (H-2020-011-M)	1 st	Not Yet Decided	Dr. A. Chakraborty (Chairman) Dr. N. Bhowmick Dr. M.P. Devi Dr. N. Sahana	University Merit Scholarship @ Rs.600 per month.
8	Sudarshana Bhujel (H-2020-011-M)	1 st	Not Yet Decided	Prof. (Dr). N. Bhowmick (Chairman) Dr. A. Chakraborty Dr. B. Chakraborty Dr. M.P. Devi	University Merit Scholarship @ Rs. 600 per month.

M.Sc (Hort.) in Post Harvest Technology/Management					
1	Raghumandala Sumasree (H-2018-017-M)	Completed	Effect of polyamine on post- harvest quality of banana	Prof. P.K. Paul (Chairman) Dr. M.P. Devi Dr. N. Bhowmick Dr. R. Chatterjee Dr. S. Ojha	University Merit Scholarship @ Rs.600 per month
2	Damonhi Phyllei (H-2019-005-M)	3 rd & 4 th	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
3	Sweta Malakar (H-2019-016-M)	3 rd & 4 th	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
4	Aamir Humayun (H-2020-017-M)	1st	Not Decided Yet	Prof. P.K. Paul (Chairman) Members not yet decided	University Merit Scholarship @ Rs.600 per month
5	Sanasam Angousana (H-2020-019-M)	1st	Not Decided Yet	Dr. M.P. Devi (Chairman) Members not yet decided	University Merit Scholarship @ Rs.600 per month

Doctoral Degree

Sl No	Name	Semester	Thesis title	Advisory Committee	Scholarship enjoyed
Ph.D in Pomology and Post Harvest Technology					
1	Sukanya Misra (H-2016-005-D)	9 th & 10 th	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 (UBKV) @ Rs. 20000 per month.
Ph.D (Hort.) Fruit Science					
1	Kondle Ravi (H-2017-004-D)	7 th & 8 th	Effect of pruning and nutrient	Dr. S. Gurung (Chairman)	Swami Vivekananda

			management of acid lime (<i>Citrus aurantifolia</i> Swingle) cv. Balaji under sub-himalayan Terai region of WB	Dr. N. Bhowmick Prof. P.K. Paul Prof. D. Mukhopadhyay	Merit Cum Means Scholarship funded by Government of West Bengal @ Rs 8000 per month.
2	Polu Parameshwar (H-2018-012-D)	5 th & 6 th	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 Government of West Bengal @ Rs.8000 per month.
3	Bidyarani Devi Senjam (H-2018-004-D)	5 th & 6 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.
4	Nim Tshering Sherpa (H-2019-003-D)	3 rd & 4 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 @ 31000 per month.
5	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 (UBKV) @ 18000 per month.
6	Santhoshkumar G M (H-2019-007-D)	3 rd & 4 th	Influence of Plant growth promoting microorganisms on the	Dr. N. Bhowmick (Chairman) Dr. A. Chakraborty Dr. A. Roy Prof. A. K. Sinha	Junior Research Fellow under the Jackfruit project funded by Department of

			performance of strawberry (Fragaria x ananasa Dutch) under the influence of abiotic stresses	Dr. S. Mandal	Science and Technology and Biotechnology, Government of West Bengal @ Rs.18700 per month.
7	Vivek Kumar (H-2020-013-D)	1 st	Not yet decided	Dr. A.Chakraborty (Chaiman) Members not decided yet	Swami Vivekananda Merit Cum Means Scholarship funded by Government of West Bengal @ 8000 per month.
8	Saidiksha Subba (H-2020-005-D)	1 st	Not yet decided	Prof. S. Gurung (Chaiman) Members not decided yet	University Research Scholarship (UBKV) @ 18000 per month.
9	Susan Subba (H-2020-010-D)	1 st	Not yet decided	Dr. A.Chakraborty (Chaiman) Members not decided yet	National Fellowship for Higher Education of ST Students funded by Government of India @ Rs. 31000/month.
Ph.D in Post Harvest Technology/Management					
1	Md. Shamsher Ahmad (H-2018-011-D)	5 th & 6 th	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)	5 th & 6 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 GoWB @ Rs. 8000 per month.
3	Jinnamu Aresh (H-2019-001-D)	3 rd & 4 th	Effect of blanching, Chemical free treatments and surface moisture drying on	Prof. P. K. Paul (Chairman) Dr. M. Preema Devi Dr. N. Bhowmick Dr. R. Chatterjee Dr. S. Mandal	Swami Vivekananda Merit Cum Means Scholarship funded by GoWB

			qualities of minimal processed of garlic cloves		@ Rs. 8000 per month.
--	--	--	---	--	-----------------------

(ii) Research Programme

(a) Departmental Research programme:

Sl. No.	Title	Associated Teacher	Status
1.	Study in plant morphology, floral biology, fruiting behavior of ber	Dr. A. Chakraborty Dr. Nilesh Bhowmick	Completed
2.	Effect of mutagen on seed germination and seedling growth behavior of acid <i>Citrus aurantifolia</i>	Dr. A. Chakraborty Dr. Nilesh Bhowmick	Completed
3.	Effect of polyamines on postharvest quality of banana	Prof. P. K. Paul Dr. M. Preema Devi	Completed
4.	Flowering, Fruiting characteristics and response of girdling on yield attributes of Litchi	Dr. Nilesh Bhowmick Dr. A. Chakraborty	Completed
5.	Effect of plant population and mulching on strawberry cultivation under Terai Region of West Bengal.	Dr. Sarad Gurung Prof. P. K. Paul	Continuing
6.	Effect of pruning and nutrient management on the performance of acid lime	Dr. S. Gurung Dr. N. Bhowmick	Continuing
7.	Studies on Mopho-Genetic Variability of pummelo	Dr. Nilesh Bhowmick	Continuing
8.	Impact of rejuvenation, pruning on mango	Dr. Nilesh Bhowmick	Continuing
9.	Process optimization for preparation and evaluation of de-bittered juice from pummelo	Dr. Mutum Preema Devi	Continuing
10.	Evaluation of ambient temperature dryer for dehydration of perishables	Dr. Prodyut Kr. Paul	Continuing
11.	Tissue culture of strawberry	Dr. Aditi Chakraborty Dr. Nilesh Bhowmick Dr. Binayak Chakraborty	Continuing
12.	Stress physiology of Darjeeling Mandarin	Dr. Nilesh Bhowmick Dr. Binayak Chakraborty	Continuing
13.	Biotic and abiotic stress on strawberry	Dr. Nilesh Bhowmick Dr. Aditi Chakraborty	Continuing
14.	Minimal processing of garlic	Prof. Prodyut Kr. Paul Dr. Mutum Preema Devi	Continuing
15.	Effect of vermicompost with pineapple foliage waste biochar in pineapple under ultra-high-density planting	Dr. Binayak Chakraborty, Dr. Nilesh Bhowmick, Prof. Prodyut Kr. Paul, Dr. Aditi Chakraborty Dr. Mutum Preema Devi	Continuing
16.	Effect of nano zinc and copper on <i>Citrus medica</i>	Dr. Nilesh Bhowmick	Continuing
17.	Effect of nano zinc and nano copper on litchi	Dr. Nilesh Bhowmick	Continuing

(b) Project Handled

Sl. No.	Project Title	Sponsoring Authority	Associate Teacher
1	Quality Control Laboratory	Mo FPI, GOI	Prof. Prodyut Kr. 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) Total Project Cost-Rs. 4,70,58,000/-	Prof. Prodyut Kr. Paul - Principal Investigator (PI) Dr. Nilesh 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, Duration: 3 years (13.01.2021 to 12.01.2024), Project Cost: Rs. 3,83,84,720 (Ref No. UBKV/DR/69 dt 11.02.21)	Prof. Prodyut Kr. Paul - Co-Investigator Dr. Nilesh Bhowmick- Co-Investigator
4	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. Nilesh Bhowmick Principal Investigator-(PI)

(c) Research findings

Kagzi lime

An investigation with two varieties of Kagzi lime namely Balaji and Local varieties were selected to induce variability through chemical mutagens (EMS) and polyploidy (Colchicine). The effect of EMS and Colchicine on seed characteristic significantly varied among the different concentration. Morphological parameters *viz.*, plant height, collar diameter, number of leaves, spines, and branches were gradually decreasing with increases the dose of EMS as well as Colchicine in both the variety. 31 numbers of plants were identified based on spineless or few numbers of spines along with discrete phenotypic characters from M₁ and C₁ population and planted in field.

Litchi

An experiment on litchi was laid out at the Instructional Farm of Dept. of Pomology and Post Harvest Technology, Faculty of Horticulture, Uttar Banga Krishi Viswavidyalaya, Pundibari, Cooch Behar, West Bengal during 2018-2019 with seven cultivars namely, Calcuttia, Elaichi, Bedana, Bombai, China, Shahi and Muzaffarpur to judge the heat unit requirement, flowering, fruiting characteristics of litchi and to estimate the effect of girdling on fruiting attributes. Litchi cv. Bedana showed better result in case of highest percentage of maximum fruit weight (17.88g), lowest seed content (10.84%), maximum fruit diameter (3.01 cm), maximum fruit volume (18.70 ml), highest TSS content (15.870 Brix), total sugar content (15.96%), reducing sugar content (12.61%), ascorbic acid content (29.47 mg/100g) and minimum fruit cracking (0.00%). Whereas, cv. Calcuttia recorded minimum fruit drop in non-girdling (36.70%) and in shoot girdling

(11.20%) and also in maximum fruit yield in non-girdling (33.15 kg/tree) as well in shoot girdling (37.21 kg/tree).

Banana

A laboratory experiment was conducted to investigate the potential of edible coatings (6% aloe vera gel and 5% corn starch coating) and polyamine spermidine for ripening time of banana (cv. Grand Naine). The control fruits treated with distilled water, no coating and no polyamine and other treatment combinations include vacuum impregnation (10 mm Hg for 10 min), different spermidine concentrations (0, 0.5, 1, 1.5 mM) along with edible coatings were studied to improve postharvest characteristics and quality maintenance of banana. Parameters such as total soluble solids, firmness, peel thickness, colour index, titratable acidity, reducing sugars, total sugars, Pectin Methyl Esterase activity and polygalacturonase activity after harvest on 3, 6, 9, 12 and 15 days after storage at room temperature. The obtained results suggested 1mM spermidine concentration, vacuum impregnation, 5% corn starch and 6% aloe vera gel coating had the potential to improve firmness, PME activity, Polygalacturonase activity and TSS of banana (cv. Grand Naine) after harvest.

Ber

A field experiment was conducted to study the plant morphology, floral biology and fruiting behaviour of ber in University premises as well as Angarkata and Madhya Kalarayerkuthi villages adjacent to University. Among the 32 selected plants, 22 numbers ber accessions showed semi erect type and 10 numbers were spreading type. Leaf length was varied between 4.76 cm to 7.83cm. Flowering duration varied from 53.67 to 83.33 days and pollen viability ranged from 82.26 to 87.01% in different accessions. Fruiting duration varied from 123.33 (ACC-29) to 158 (ACC-18) days irrespective of different accessions. Maximum pulp weight was found in ACC-12 (58.90 g) and minimum pulp weight was found in ACC-8 (4.55 g). Highest TSS (15.77°B) and ascorbic acid (76.27 mg/100gm) was recorded in ACC-11.

(iii) Developmental Programme:

Sl. No.	Title	Associated Teacher	Status
1.	Maintenance of Fruit Nursery for production of quality planting materials	Dr. Nilesh Bhowmick	Continuing
2.	Development and maintenance of different pineapple varietal block	Dr. Nilesh Bhowmick	Continuing
3.	Maintenance of Assam Lemon block and propagation practices for raising of saplings	Dr. Nilesh Bhowmick	Continuing
4.	Maintenance of Litchi Varietal block and propagation practices for raising of saplings	Dr. Nilesh Bhowmick	Continuing
5.	Maintenance of guava varietal block and propagation practices for raising of saplings	Dr. Nilesh Bhowmick	Continuing
6.	Maintenance of mango mother block	Dr. Nilesh Bhowmick	Continuing
7.	Maintenance of mango varietal block	Dr. Nilesh Bhowmick Dr. Aditi Chakraborty	Continuing

8.	Maintenance of mother block of litchi and guava for raising of saplings	Dr. Nilesh Bhowmick Dr. Aditi Chakraborty	Continuing
9.	Maintenance of citrus rootstock, water apple orchard	Dr. Mutum Preema Devi	Continuing
10.	Development and maintenance of jackfruit genotypes block	Dr. Nilesh Bhowmick	Continuing

5) PUBLICATIONS

(a) Research Paper

1. Kondle, R., Gurung, S., Bhowmick, N. (2020). Effect of pruning and paclobutrazol application of acid lime (*Citrus aurantifolia* Swingle) cv. Balaji under Sub-Himalayan Terai region of West Bengal. *International Journal of Chemical Studies*; **8**(4): 201-206, ISSN:2349-8528 [**NAAS Rating -5.31**]
2. Jannila, P., Chakraborty, A., Bhowmick, N., Dey, A. N., Sarkar, A. and Debnath, M. K. (2020). Influence of pollen on physicochemical characteristics of selected guava (*Psidium guajava* L.) genotypes. *Electronic Journal of Plant Breeding*, **11**(2): 698-701, ISSN: 0975-928X [**NAAS Rating -4.97**]
3. Chamling, N and Bhowmick, N. (2021). Effect of secondary hardening media on the performance of *in-vitro* raised banana plantlets cv. Grand Naine. *Journal of Crop and Weed*, **17** (1): 93-98 [**NAAS Rating -5.46**]
4. Devi, M. P., Chakraborty, I., Chakraborty, A., Bhowmick, N. (2020). Effect of edible coating on the storage behaviour of sapota (*Achras sapota* L.) var. Cricket Ball. *International Journal of Food Fermentation Technology*, **10**(1): 27-31 [**NAAS Rating -4.03**]
5. Rathod, K.D., Patel, A.J. and Chakraborty, B. (2021). Strawberry cultivation practices in soilless growing substrates: A review article. *Intl. J. Chem. Stud.* **9**(1): 1253-1256.

(b) Book Chapter

1. Bhowmick, N., Senjam, B. D., Devi., M. Preema (2020). Medicinal properties of pummelo (*Citrus maxima* (Burm.) Merr. In: *Medicinal and Aromatic plants: Utilization and Conservation*, Eds. Shukla, G., Roy, B, Vineeta, Chakravarty, S., New India Publishing Agency, New Delhi-110034, ISBN:978-93-89571-87-5, pp 133-144
2. Parameshwar, P., Bhowmick, N, Chhetri, A.(2020). Medicinal properties of jackfruit (*Artocarpus heterophyllus* Lam.). In: *Medicinal and Aromatic plants: Utilization and Conservation*, Eds. Shukla, G., Roy, B, Vineeta, Chakravarty, S., New India Publishing Agency, New Delhi-110034, ISBN:978-93-89571-87-5, pp. 153-172
3. Chamling, N., Bhowmick, N., Ekka, J. P. (2021). Rootstock: a boon in fruit production (Chapter 43). *Cutting Edge Perspective in Agricultural and Allied Sciences (Vol-II)*. Ghosh, S. K., Rout, R. K., Bakshi, B. (2021). Dodo Books Indian Ocean Ltd., Member of the Omni Scriptum S R L Publishing Group, ISBN:978-613-8-95551-1, pp. 281-306
4. Joshi V. K. and Devi, M. P (2021). Flavour in Sensory Science: Role, Chemistry, Interactions, Profiling, Electronic Nose and its applications in food. In: *Postharvest management of fruits and vegetables*. Joshi, V. K. (ed.) NIPA, New Delhi.
5. Sabastian K.S., Hemanta, L., Ariina, M.M.S., Mathukmi, K. and Devi, M. P. (2021) Micropropagation of Orchid. In.: *Recent Trends In Propagation of Forest and Horticultural Crops*. Beura, S., Sandeep R., Saswat N., Kalyani P., Neelam K. (eds.) Taran Publication, Haryana, pp: 379-383.

6) EXTENSION PROGRAMME

(a) Radio Talk/Newspaper article

Sl. No	Title of programme/ news heading	Date of broadcast/ publish	TV or Radio Channel/News paper	Name of expert
1	<i>Peper Tarukhir Papain</i> (Eng. Papain is the latex of papaya)	13 th Jan., 2021	Anandabazar Patrika	Dr. B. Chakraborty
2.	<i>Uttarer Matite Brazil-er fal-er chash</i>	18 th March 2020	Anandabazar Patrika	Dr. M. Preema Devi

(b) Training/Demonstration Programme

Sl. No.	Subject	Period	Venue	Organizer	Resource Person
1.	Presentation on Jam, jelly and pickle making.	--	Gopalpur, Cooch Behar, W.B.	BSF	Dr. M. Preema Devi

7) ACADEMIC/RESEARCH ACTIVITIES:**(a) Members of different committee, assignment, additional responsibility**

Sl. No.	Committee/Assignment	Teacher associated
1	Dean, Faculty of Horticulture & Registrar (Actg.)	Prof. Prodyut Kr. Paul
2	Head, Dept. of Pomology & Post Harvest Technology	Dr. N. Bhowmick
3	Member, Faculty Council, Faculty of Horticulture (Ref No. 158/UBKV/Est dt 06.07.2020) (Ref No. 1126/UBKV/Est(F.C.-Hort.)/31 dt 20.11.2015)	Dr. P. K. Paul Dr. N. Bhowmick
4	Member, Post Graduate Committee	Dr. N. Bhowmick
5	Provost, M. N. Saha Hall (Ref No. 2129/UBKV/Est. (Trans.)/T/NT-40 dt 30.3.17, Ref 500/UBKV/Est (Trns)/T/F-39 dt 02.08.2019)	Dr. N. Bhowmick
6	Convenor, Faculty Curriculum Committee (Ref No. 2161 dt 18.01.2018)	Dr. N. Bhowmick
7	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	Member, Accreditation Committee of the University (Convener, College of Horticulture, Information of Individual Colleges) [vide Ref No. 656/UBKV/Est. (Acre.)-170 dt 01.09,2016]	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> (Vide 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	Committee Member, Socio-economic developmental programme for the villagers along the border areas (Ref No. 60/Hort/UBKV dt 06.05.2019)	Dr. N. Bhowmick
12	External Expert for the Guest Faculty Interview of NEHU, Tura on 22.02.2021 (Ref TC/Hort/2020/416 dt 18.02.2021)	Dr. N. Bhowmick
13	Member, Farm Management Committee	Dr. N. Bhowmick

14	Convenor, Examination Committee, UBKV [Ref. No. 1278/EXAM/UBKV dated 14-02-20]	Dr. B. Chakraborty
15	Member, Institutional Bio-safety Committee (IBSC) [Ref. No. VC/UBKV-3285 dated 04-11-2020]	Dr. B. Chakraborty
16	Member from PPHT, Student Ready RHWE 2020-21 Management Group [Ref. No. 82/Hort./UBKV dated 25-09-2020]	Dr. B. Chakraborty

(b) Organizing Seminar/Symposium/Conference/Webinar/Workshop

Sl. No.	Subject/Title	Period	Venue	Organizer	Responsibility	Resource Person
1	National WEBINAR on Revitalizing Horticulture through Strategic Postharvest Interventions	28.08.2020	Virtual mode from UBKV	NAHEP, UBKV	Organizing Secretary	Dr. Nilesh Bhowmick
2	International Conference on New Paradigms for Agriculture, Food and Sustainability Concerns	26-28 th Feb., 2021	Virtual Mode,	Agricultural Letters	Co-Organizing Secretary	Dr. Binayak Chakraborty

(f) Participation in Seminar/Symposium/Conferences/ Webinar /Workshop

Sl. No.	Subject/Title	Venue (Duration)	Organizer	Title of the Paper presented	Associated Teacher/ Student
1	International E-Conference on Advances and Future Outlook in Biotechnology and Crop Improvement for Sustainable Productivity	Virtual Mode, (24 to 27. 11. 2020)	College of Horticulture, Bengaluru, University of Horticultural Sciences, Karnataka	Diversity of pummelo [<i>Citrus grandis</i> (L.) Osbeck] germplasm under northern parts of West Bengal (Poster Presentation)	Dr. Nilesh Bhowmick
2	International WEBINAR on Innovation and Advances in Plant Science	Virtual Mode (21.11. 2020)	Balarampur College, Sidhu-Kanhu-Birsha University, Purulia, WB	Attended	Dr. Nilesh Bhowmick
3.	International Conference on New Paradigms for Agriculture, Food and Sustainability Concerns	Virtual Mode (26-28.02. 2021)	Agricultural Letters	Effect of foliar application of liquid organic fertilizers on growth, yield and quality of strawberry (<i>Fragaria x ananassa</i> Duch.) cv. Winter Dawn (Oral Presentation)	Dr. Binayak Chakraborty
Participation by the post-graduate students					

4.	Research methodology concepts and application.	26-27.06.2020	MPUAT, Udaipur, Rajasthan.	-	Vivek Kumar
5	Global conference on Emerging agricultural research to endure predicament of COVID-19 pandemic.	12-13,12.2020	AESSRA, New Delhi.	Integrated nutrient module can reduce fertilizer dose in cape gooseberry.	Vivek Kumar
6	Internaional Training Programme on "Organic Farming Field to Fashion"	Virtual	PDKV, Akola, Maharashtra	Training programme	Novin Chamling

8) OTHER ACADEMIC ACTIVITIES:

a) Award

Name of Award/Recognition	Name of Sponsoring Organization	Year	Associate Teacher
Young Scientist Award	Agricultural Letters	2021	Dr. B. Chakraborty
Best Oral Presentation Award	Agricultural Letters	2021	Dr. B. Chakraborty
Adarsh Vidya Sarasati Rashtriya Puraskar	Global Management Council, Ahmedabad	2021	Dr. B. Chakraborty

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

Sl. No.	Name of the Course	University	Associate Teacher
1.	End Term Paper Setter FSC-311 of Orchard & Estate Management (1+1) of B.Sc. (Hort) degree programme	Central Agricultural University (Ref No. CAU/CHF/ACAD/Exam(H)/2018/3297 dt 08.02.2021)	Dr. Nilesh Bhowmick

c) Thesis Evaluation:

Sl. No	Name of Student	Thesis Title	Degree	University	Associated Teacher
1	Kirankumar KH (UHS17 PGD211)	Field evaluation of in vitro derived mutants of different varieties of banana (<i>Musa</i> spp)	PhD	University of Horticultural Sciences, Bagalkot, Karnataka (No. R/UHSB/ Evln/ Ph.D./ 283/2020-21/ 397 dt 25.08.2020)	Dr. Nilesh Bhowmick
2	Songhat William Haokip	Influence of organic and inorganic sources on growth, yield, fruit quality and post	M.Sc. (Hort)	College of Horticulture and Forestry	Dr. Nilesh Bhowmick

	(U-18-AR-01-005-M-H-008)	harvest life of lemon (<i>Citrus limon</i> L. Burm) cv. Assam Lemon under the foothills of Arunachal Pradesh		(No. CHF /CAU/ACAD /TE/(PG)(H)/2017/1012 dt 05.08.2020)	
3	Amulya S (ID No. UHS 18PGM1041)	Morphological and molecular characterization of in vitro mutants of banana cv. Rajapuri Bale (AAB)	M.Sc. (Hort) in Fruit Science	University of Horticultural Sciences, Bagalkot, Karnataka (Ref No, R/UHSB/Evln./M.Sc./247/2019-20/324 dt 10.08.2020 & Ref No. Dean PGS/UHSB /313/2020-21 dt 26.11.2020)	Dr. Nilesh Bhowmick
4	Kh. Anush Sheikh (U-18-AR-01-005-M-H-010)	Growth, yield, fruit quality and leaf nutrient status of lemon (<i>Citrus limon</i> L. Burm.) Assam Lemon in response to foliar application of micronutrients	M.Sc. (Hort)	College of Horticulture and Forestry (No. CHF/ CAU/ACAD /TE/ (PG) (H) /2017/2436 dt 05.12.2020)	Dr. Nilesh Bhowmick
5	Nungshitula Longkumtsur (Admn. No. M-1052/17 Regn.No.917 074-2017-18)	Effect of integrated nutrient management on growth and flowering of tissue culture banana cv. Grand Naine	M.Sc. (Hort)	Dept. of Horticulture, School of Agricultural Sciences & Rural Development, Nagaland University (via email)	Dr. Nilesh Bhowmick

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

Sl. No.	Name of Student	Course	Dept.	Thesis Title	Associated Teacher
1	Suman Natta (A-2017-028-D)	Ph.D.	Biochemistry	Evaluation and characterization of nutritional components of jackfruit (<i>Artocarpus heterophyllus</i>) for potential applications as functional food	Dr. N. Bhowmick
2	Fouzia Bari (A-2017-005-D)	Ph.D.	Agricultural Entomology	Screening of different banana cultivars against banana scare beetle.	Prof N. Bhowmick
3	Samima Sultana (H-2018-014-D)	Ph.D.	Plantation Crops and Processing	Impact of arecanut based cropping system on growth, yield of different subsidiary crops and carbon	Dr. N. Bhowmick

				sequestration in north-eastern foot hills of West Bengal	
4	Sandeep Chetri (H-2018-015-D)	Ph.D.	Plantation Crops and Processing	Studies on the performance of four varieties of arecanut (<i>Areca catechu</i>) under organic multi-storied cropping system	Dr. N. Bhowmick
5	Eggadi Ramesh (H-2018-008-D)	Ph.D.	Vegetable Science	Standardization of Integrated Nutrient Management and Application of Bio-Stimulants for Growth, Yield and Post Harvest Quality of Tomato	Dr. M. P. Devi
6	Kheyali Ghosh (H-2018-010-D)	Ph.D.	Vegetable Science	Studies on growth, yield and shelf-life of okra (<i>Abelmoschus esculentus</i> (L.) Moench) as influenced by date of sowing, spacing and packages	Prof. P. K. Paul Dr. M. P. Devi
7	Toko Yarin (H-2019-012-D)	Ph.D.	Plantation Crops and Processing	Effect of intercropping on growth and latex physiological parameters of different rubber (<i>Hevea brasiliensis</i> Mull, Arg.) clones at juvenile phase in West Bengal	Dr. N. Bhowmick
8	Md. Saheen Akhtar (A-2020-002-D)	Ph.D	Agricultural Economics	Fruit production and processing potential in India with special reference to Mango	Dr. N. Bhowmick
9	Kamal Ghising (H-2018-11-M)	M.Sc.	Forestry	Effect of growing media and nutrients on production of teak (<i>Tectona grandis</i> L.) seedlings through stump	Dr. N. Bhowmick
10	Marina Narjinary (H-2018-13-M)	M.Sc.	Floriculture and Landscape Architecture	Standardization of dehydration method and surface coating for improving quality and shelf-life of rose dry flowers	Dr. M. P. Devi
11	Pema Kiden Sherpa (H-2018-015-M)	M.Sc	Forestry	Studies on different pre-sowing treatments and nutrient management for growth behavior of Champa (<i>Michelia champaca</i> Linn.) seedlings	Dr. A. Chakraborty
12	Dharmaraj Saren (A-2019-010-M)	M.Sc.	Agricultural Entomology	Studies on <i>Cicadellid</i> hopper diversity and their population behaviour associated with mango ecosystem in sub-Himalayan West Bengal	Dr. N. Bhowmick
13	Umrasong Mog (H-2020-09-M)	M.Sc.	Forestry	Standardization of pre-germination treatment for germination and growth behavior of <i>Ailanthus grandis</i> Prain and <i>Sterculia alata</i> Roxb.	Dr. N. Bhowmick

14	Trinayanee Sharma (H-2020-016-M)	M.Sc.	Plantation Crops & Processing	Studies on flowering and fruiting behaviour of cashew (<i>Anacardium occidentale</i> L.) in Terai region of West Bengal	Dr. N. Bhowmick
15	Mallikarjun Pirgunde (H-2020-002-M)	M.Sc.	Floriculture, Medicinal and Aromatic Plants	Influence of cultivars and organic nutrient sources on china aster (<i>Callistephus chinensis</i> L. Nees) in <i>terai</i> region of West Bengal	Dr. B. Chakraborty

e) Reviewer of Journal

Sl. No.	Topic	Name of journal	Associated Teacher
1.	Effect of MS medium strength and growth hormones on shoot proliferation of Yeheb (<i>Cordeauxia edulis</i> , Hemsl.): A review	Plant Cell Biotechnology and Molecular Biology, June 2020	Dr. Binayak Chakraborty
2.	Effects of rootstock ages and scion sources on grafting <i>Malus doumeri</i> , an apple tree	Plant Cell Biotechnology and Molecular Biology, May, 2020	Dr. Binayak Chakraborty
3.	Response of Croton to Aloe vera gel and indol-butyric acid in different propagating media	Asian Journal of Agricultural and Horticultural Research, May 2020	Dr. Binayak Chakraborty
4.	Biohardening of tissue cultured banana plantlets of cv. Ney Poovan for the management of <i>Fusarium</i> wilt of banana with <i>Bacillus amyloliquefaciens</i> (VB7) triggers defence gene products and growth promotion	Current Journal of Applied Science and Technology, Feb., 2021	Dr. Binayak Chakraborty
5.	Application of essential oils for maintaining postharvest quality of 'Rongrien' rambutan fruit	Scientia Horticulturae (Ref No. HORTI 31743 dt 06.02.2021)	Dr. Nilesh Bhowmick
6.	Effect of fruit covers and mineral interaction on the quality of pineapples	Scientia Horticulturae (Ref No. HORTI 31105 dt 15.03.2021)	Dr. Nilesh Bhowmick

f) Internal Question Setter

Sl. No.	Paper	Associated Teacher
1.	Preparation of End term Question of PHT 501	Prof. P.K.Paul & Dr. M. Preema Devi

g) Internal Question Moderation

Sl.	Associate Teachers	Subjects
1	Prof. Prodyut Kr. Paul	PPT 301, PPT 352
2	Dr. Nilesh Bhowmick	PPT 101, PPT 151, PPT 201, PPT 251, PPT 351

3	Dr. Aditi Chakraborty	PPT 101, PPT 102, PPT 151, PPT 152, PPT 251, PPT 351
4	Dr. Mutum Preema Devi	PPT 301, PPT 352, PPT 353, ELC 352, PCP 351, PCP151
5	Dr. Binayak Chakraborty	PPT 152, PPT 251, PPT 252

h) Internal Evaluator of answer scripts

Sl. No.	Paper	Associated Teacher
1	PPT 102: Plant Propagation & Nursery Management (Ref No. 108/EXAM/UBKV dt 15.01.2020 & Ref No. 121/EXAM/UBKV dt 21.01.2020)	Dr. Nilesh Bhowmick

i) Conduction of Internal Practical examination

Sl. No.	Associate Teachers	Subjects
1.	Dr. N. Bhowmick	PPT 101
2.	Dr. M. Preema Devi	HOR 152, PPT 301, PPT 353, ELC 352, PHT 501, PHT 502, PHT 505, PHT 506, PHT 507, PHT 508, PHT 509

9) ADDITIONAL RESPONSIBILITIES

Dr. Nilesh Bhowmick

- ✓ Member, Enquiry Committee for the liabilities of the Mess Committee of the PCM Hostel (Ref No. 177/UBKV/Est dt 10.07.2021)
- ✓ Member, Central Level Evaluation of Rural Agricultural Work Experience of B.Sc. (Ag.) Students (Ref No 686/EXAM/UBKV dt 23.03.2021)
- ✓ Member, Editorial Board (2020-21), International Journal of Minor Fruits, Medicinal & Aromatic Plants (ISSN: 2424 6921)

Dr. Mutum Preema Devi

- ✓ Course creator on the theme/topic "Role of flavour in sensory science" in the three month certificate course on " Smart Farming Technologies and Secondary Agriculture Key to making Indian Agriculture Remunerative, during January 08, 2021 to April 07, 2021 under NAHEP-CAAST Sub-Project at Department of Post Harvest Technology, ACHF, NAU, Navsari
- ✓ Verification of documents of PG students (Ref. No. UBKV/DPGS/174/2021, dt. 22.02.2021)
- ✓ Departmental nominee for BRS of Ph.D. students (Ref. No. UBKV/HORT/PPHT-486, dt., 03.12.2020)

Dr. Aditi Chakraborty

- ✓ Verification of documents of PG students (Ref. No. UBKV/DPGS/174/2021, dt. 22.02.2021)
- ✓ Departmental nominee for BRS of Ph.D. students (Ref. No. UBKV/HORT/PPHT-486, dt., 03.12.2020)

Dr. Binayak Chakraborty

- ✓ Reviewer Nominee, End Term Answer scripts of the Course No. PPT-101, PPT-102 and PPT- 201 [Ref. No. 566/UBKV/EXAM dated 21-01-2021]

- ✓ Verification of documents of PG students (Ref. No. UBKV/DPGS/174/2021, dt. 22.02.2021)
- ✓ Editorial Board Member, Agricultural Letters- E-magazine <https://agletters.in/>
- ✓ Editorial Board Member, Glacier Journal for Scientific Research, ISSN:2349-8498, Global Management Council, Ahmedabad

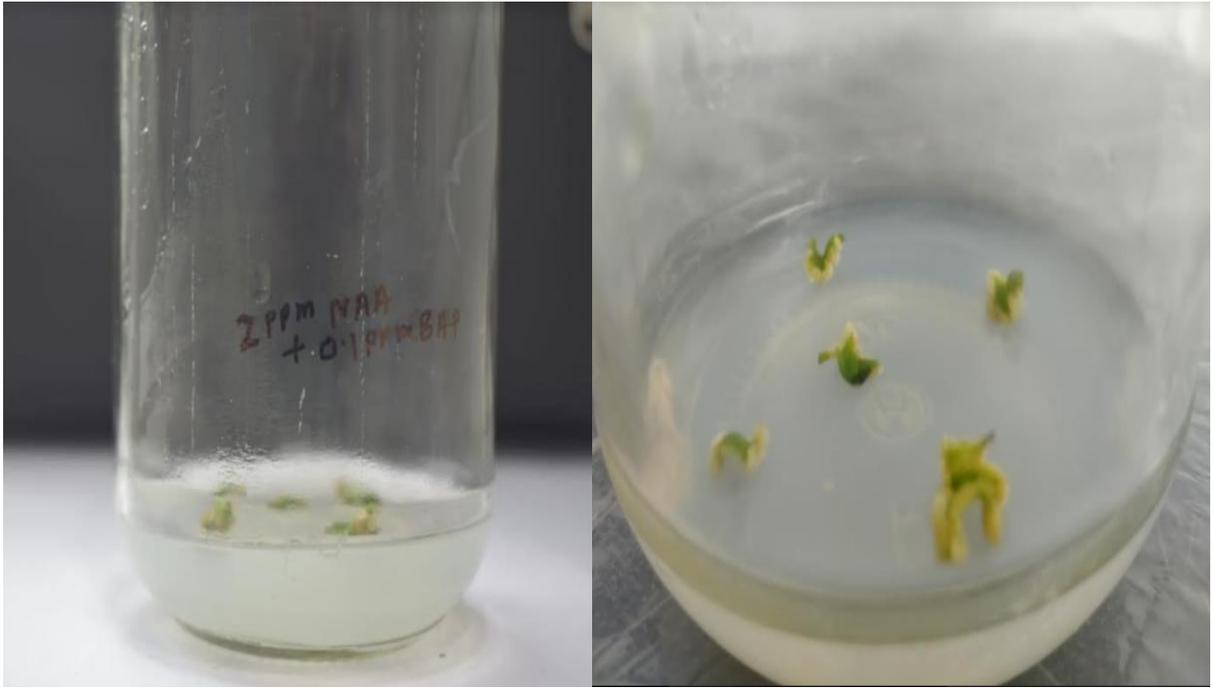
10) LIFE MEMBERSHIP OF PROFESSIONAL SOCIETIES/JOURNALS

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)	I.A.R.I., New Delhi	Dr. N. Bhowmick
4	Society Promotion of Horticulture (Journal of Horticultural Science)	I.I.H.R., Bengaluru	Dr. N. Bhowmick Dr. A. Chakraborty
5	Indian Society for Plant Physiology (Indian Journal of Plant Physiology)	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	Dr. N. Bhowmick
8	Cooch Behar Association for Cultivation of Agricultural Sciences (Journal of Agricultural Technology)	U.B.K.V.	Prof. P.K.Paul Dr. N. Bhowmick Dr. M. Preema Devi Dr. A. Chakraborty
9	Association of Food Scientist and Technologist	CFTRI, Mysore	Dr. P.K.Paul Dr. M. Preema Devi
10	Indian Society of Horticultural Research and Development (Progressive Horticulture)	ISHRD, Chaubattia, Uttarakhand	Dr. B. Chakraborty
11	Medicinal and Aromatic Plants Association of India (Open Access Journal of Medicinal and Aromatic Plants) ISSN 0974-7877	MAPAI, Anand, Gujarat	Dr. B. Chakraborty
12	Agricultural Letters, (Magazine Agricultural Letters)	Agricultural Letters, Raichur, Karnataka	Dr. B. Chakraborty
13	Glacier Journal of Foundation Global Management Council, Ahmedabad	Global Management Council, Ahmedabad	Dr. B. Chakraborty

11) ANNUAL MEMBERSHIP OF PROFESSIONAL SOCIETIES/JOURNALS

Sl. No.	Name of the Journal/Society	Address	Teacher
1	Indian Horticulture	ICAR, New Delhi	Mr. N. Bhowmick

PHOTO GALLERY



Ph.D. research work of Mr. Nim Tshering Sherpa on tissue culture in strawberry through leaf segment



Ms. Sweta Malakar, M. Sc. Student conducting her research work



Mr. Zigme Wangchuk Sherpa, M. Sc. Student conducting his research work



Paclobutrazol application and shoot prunning in mango by Polu Parameshwar, Ph.D. Student



Photographs of Ph.D. research work of Ms. Sukanya Misra



Dr. Nilesh Bhowmick and Sri Nitish Ch Saha with a successful Nursery Man trained by the Department



Low chilling apple grown under the Instructional Farm of the Department



Visit to Regional Research Station, Hill Zone, Kalimpong, UBKV with the PG students for supervising M.Sc. Thesis work