ज्ञानेन त्रायदृश्यताम् सीता
BIDHAN CHANDRA
KRISHI VISWAVIDYALAYA
WEST BENGAL

ANNUAL REPORT
2022-23

Bidhan Chandra Krishi Viswavidyalaya

Mohanpur, Dist.-Nadia, West Bengal, India, PIN-741252

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Bidhan Chandra Krishi Viswavidyalaya
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MANDATE

- To provide facilities for the study of agriculture, both basic and applied sciences relating to terrestrial and aquatic crops and animal production, forestry, including farm forestry, home economics, agricultural engineering and technology, horticulture, marketing and processing, land use and management, soil and water management and all matters collected therewith and incidental thereto.
- To conduct researches in these sciences and undertake the educational and extension programmes in agriculture among the rural clientele base, keeping in view the requirements of the state.
- To prove appropriate technical and consultative support to the state government towards its implementation of agricultural development programme.

MISSION

- The mission of Bidhan Chandra Krishi Viswavidyalaya is to bring about qualitative and quantitative changes in the life of farmers and other relevant stakeholders through human resource development, technological advancement and dissemination of technologies related to agriculture and allied activities.

GOALS

- To provide contemporary quality education in the areas of agriculture and allied fields.
- To create opportunities for basic applied and adaptive research so as to offer proper solution to the emerging problems in agriculture and development of relevant technology befitting the needs of the farmers and other stake-holders.
- To foster technology transfer to the farming community and different agricultural organizations through various extension education and outreach programme for bringing about equitable targeted growth in all spheres of rural economic activities.

PREFACE

It is with great pride and satisfaction that I present the ***Annual Report 2022–2023*** *of Bidhan Chandra Krishi Viswavidyalaya (BCKV). Although I assumed the responsibilities of Vice Chancellor on December 19, 2024, this report reflects the collective academic and institutional accomplishments of a preceding period—a testament to the university's enduring commitment to excellence. The reporting year marked a significant phase of resurgence and resilience, as the university navigated post-pandemic challenges with renewed vigour. Our faculty, students, scientists, and staff demonstrated exceptional dedication, resulting in a wide array of academic, research, and extension achievements. The university has continued to uphold its legacy as a centre of excellence in agricultural education and research. More than 21 ICAR-JRFs, 13 ASRB-NET, and several CSIR, UGC, and GATE fellowships were secured by our students. Many also gained admission to premier institutions including IITs, IIMs, and international universities. The university team excelled at the National Youth Festival with seven awards and a second overall position, underscoring our holistic development approach.*

Our research ecosystem thrived with over 300 NAAS-rated publications (including 36 above NAAS score 10), 19 books, and 106 book chapters. Technological innovations during the year included the release and registration of several crop varieties—Bidhan Suphala brinjal, Trombay Bidhan Mustard-143, Bidhan Lentil-16, BCCC-1 white jute, BCCO-13 tossa jute, and the aromatic rice Radhunipagal contributing meaningfully to agrobiodiversity and farmer livelihoods. Cutting-edge tools such as the INDOBLIGHTCAST forecasting model and PXRF-based soil sensing system reflect our movement towards precision and climate-resilient agriculture. The university also enhanced its engagement through thirty AICRP/AINP projects, along with more than forty-four externally funded schemes supported by ICAR, DST, BRNS, Government of India (GoI), IMD, Government of West Bengal (GoWB), NTPC, ISRO, MSME, Khadi and Village Industries Commission (KVIC), Sufal Bangla, and BARC, and seven internationally funded projects with support from CIMMYT, ICARDA, ACIAR, the Indo-German Science and Technology Programme, and the International Atomic Energy Agency (IAEA), besides several research projects sponsored by leading industrial organizations. Our extension efforts, channeled through five Krishi Vigyan Kendras and several regional research stations, enabled impactful outreach to farming communities across agro-ecological zones.

Notably, our implementation of ICAR's Student READY programme—including RAWE, RHWE, and Experiential Learning Modules—enabled immersive field exposure and entrepreneurship development among students.

I express my sincere gratitude to all faculty, researchers, students, and administrative staff for their unrelenting efforts. I acknowledge the leadership of my predecessor, whose tenure laid the foundation for many of the achievements documented herein. I also thank the Annual Report Committee for their meticulous work and extend my appreciation to the Government of West Bengal, ICAR, and all collaborating and funding agencies for their sustained support.

As we look ahead, BCKV remains resolute in its mission to catalyze agricultural transformation through knowledge, innovation, and service to society.

August, 2025
B.C.K.V., Mohanpur

Dr. Ashok K Patra
Vice Chancellor

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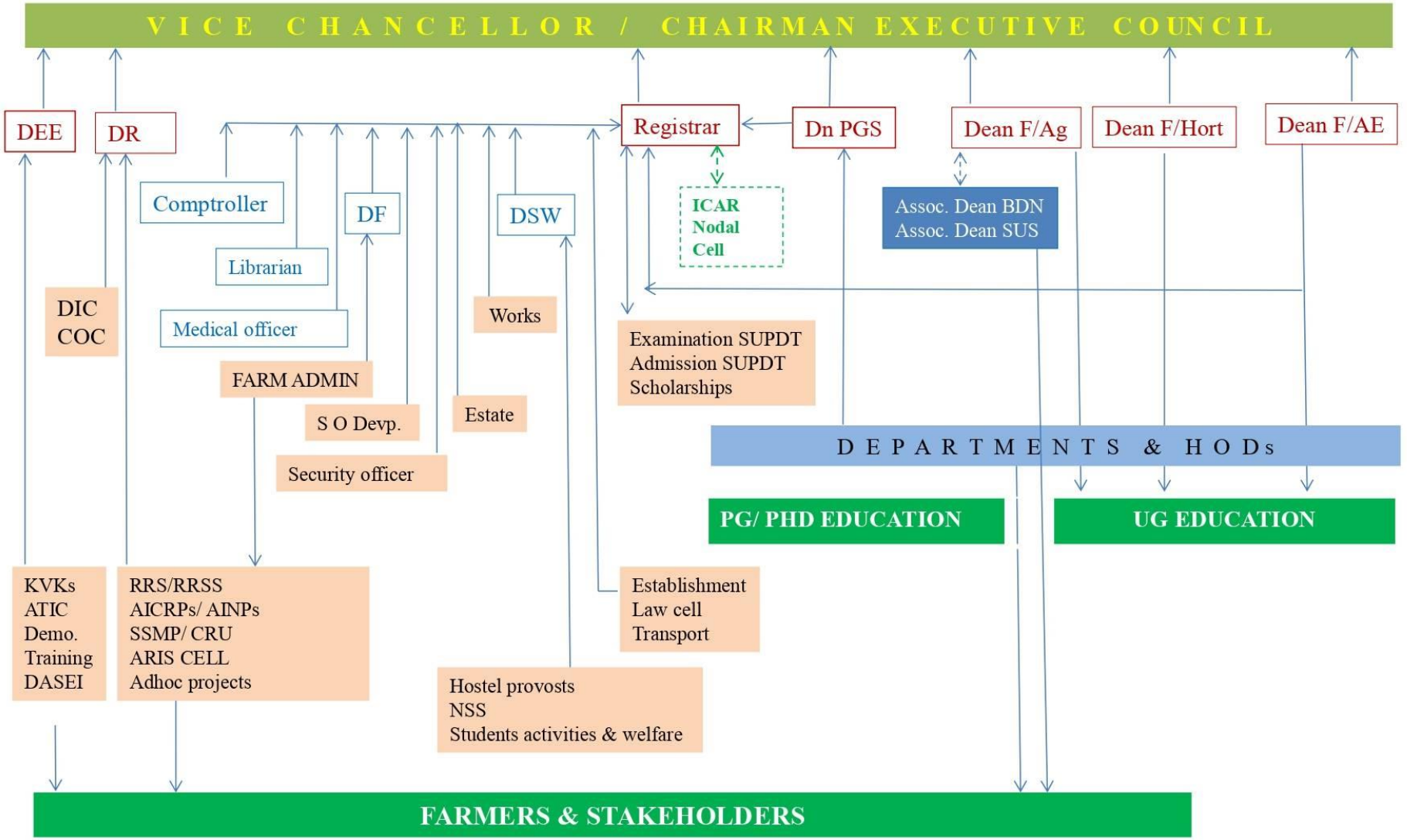
VICE CHANCELLOR / CHAIRMAN EXECUTIVE COUNCIL
DEE
DR
Registrar
Dn PGS
Dean F/Ag
Dean F/Hort
Dean F/AE
Comptroller
DF
DSW
ICAR Nodal Cell
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Librarian
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COC
Medical officer
Works
Examination SUPDT
Admission SUPDT
Scholarships
FARM ADMIN
S O Devp.
Estate
Security officer
DEPARTMENTS & HODs
PG/ PHD EDUCATION
UG EDUCATION
KVKs
ATIC
Demo.
Training
DASEI
RRS/RRSS
AICRPs/ AINPs
SSMP/ CRU
ARIS CELL
Adhoc projects
Establishment
Law cell
Transport
Hostel provosts
NSS
Students activities & welfare
FARMERS & STAKEHOLDERS


West Bengal
Jurisdiction Map of BCKV covering South Bengal Districts up to Murshidabad
N
Kalimpong
Darjeeling
Jalpaiguri
Alipurduar
Cooch Behar
North Dinajpur
South Dinajpur
Maldah
Murshidabad
Birbhum
Paschim Bardhaman
Purba Bardhaman
Nadia
Purulia
Bankura
Hooghly
North 24 Parganas
Howrah
Kolkata
Pashchim Midnapore
Jhargram
South 24 Parganas
East Midnapore

ABOUT THE VISWAVIDYALAYA

The Bidhan Chandra Krishi Viswavidyalaya (BCKV) with the headquarter at Mohanpur, Nadia was established in 1974, an offspring of erstwhile Faculty of Agriculture under Kalyani University and it completed five decades of journey in 2022. It championed the education and research in twenty five diverse disciplines spread across the faculties of Agriculture, Horticulture and Agriculture Engineering and offered graduates, post graduates and doctoral degree to the cause of the development, research and industry sectors and responded to the scale up of livelihood sectors of the state and the nation. The last decade saw the establishment of two new Colleges of Agriculture, at Bardhaman since 2014 and the other at Bankura since 2015 functioning successfully and adding to the glory of Viswavidyalaya. Regional Research Stations (RRS) and substations in and across Jhargram (Red& Laterite Zone), Kakdwip (Coastal Zone) and Gayespur (New Alluvial Zone) along with respective substations (RRSS) and five Krishi Vigyan Kendras (KVK) dotted in Nadia, Hoogly, Howrah, Purba Medinipur and Jhargarm cater to the research and extension needs of the agriculture predominant issues of South Bengal districts.

In recent past, the students have achieved commendable success in different national level competitive examinations including ICAR's JRF/SRF/NET. In national level cultural meet, the team of students has earned the second best position. Girl students, their number and feats also speak volumes of the Viswavidyalya.

The Viswavidyalaya partners the national needs through thirty AICRP/AINPs including voluntary centers apart from several adhoc projects sponsored by State, Central funding agencies and Industry backed ones. Other than its mandated activities, the BCKV provides technology support and advisories to the state government. Frontier area research was spearheaded with collaborations with IRRI, ICARDA, CYMMIT, ACIAR, BARC, IISER and IITs.

In all these endeavors and achievements the University is geared up to the cause of one hundred and thirty million small holder families to meet their demand towards a sustainable food and nutritional security and improving agricultural productivity and agro based industry possibilities in unmatched contributions.

FACULTY OF AGRICULTURE

The Faculty of Agriculture has embarked on a remarkable journey since its inception in 1960 under the auspices of the Kalyani University. Following the establishment of West Bengal's first agricultural university, Bidhan Chandra Krishi Viswavidyalaya, in 1974, the Faculty has successfully met the state's aspirations by providing agricultural education aimed at human resource development, enhancing food, feed, and fiber production, and fostering rural and entrepreneurial awareness among students.

The Faculty comprises 16 departments: Agricultural Chemicals, Agricultural Economics, Agricultural Extension Education, Agricultural Meteorology and Physics, Agricultural Statistics, Agronomy, Biochemistry, Entomology, Genetics and Plant Breeding, Molecular Biology and Biotechnology, Plant Pathology, Plant Physiology, Seed Science and Technology, Soil Science, Soil and Water Conservation, and Animal Science. It offers courses to undergraduate and graduate students at the Master's and Ph.D. levels.

With its modern laboratory facilities, distinguished teachers and scientists, and a robust alumni network supported by a comprehensive technical and administrative system, the Faculty of Agriculture has cultivated an unparalleled reputation at both national and international levels.

Department: Agricultural Biochemistry

The Department was established in 1998 through dissociation from the parent Department of Agricultural Chemistry and Soil Science to keep pace with teaching and research in the frontier areas of biochemistry as a fundamental component of agricultural science. The Department of Agricultural Biochemistry caters to courses at the graduate, postgraduate, and doctoral levels and produces students with bright careers in the future, barring faculty constraints.

Achievements

Research thrust: Since inception, the department has emphasized to pursue research on the nutritional and antioxidative properties of various bioactive principles in foods including agricultural crop plants and produce.

- It has conducted investigations on fruits and vegetables, pulses, cereals, spices and cash crops like tea etc. cultivated through organic and conventional methods.
- Presently it is conducting research on the non-Basmati aromatic rice landraces of the Eastern India.
- Published two papers and one book.

Department: Agricultural Biotechnology

The department of Agricultural Biotechnology is a full-fledged department that emerged in 2013 with the recommendation of the State Government. of West Bengal after the revitalization of the erstwhile Department of Biotechnology, Instrumentation and Environmental Science, which used to offer courses to the UG, PG, and Ph.D. students of both the Agriculture and Horticulture Faculties.

Achievements

- ***Publications***: During the academic year 2022-23, the department made significant contributions to academic literature, with one book, three book chapters, and five research papers published across different NAAS rating categories.
- ***Students' achievements***: Notably, two Ph.D. scholars, Monoj Sutradhar and Manisha Mitra, were awarded their doctoral degrees.
- ***Resource person***: The faculty members of the department have been appointed to various academic and professional bodies. They have served as external expert members of the Board of Studies for both undergraduate and postgraduate programs in Agricultural Biotechnology at esteemed institutions such as RKMVERI, Narendrapur, and MAKAUT, Haringhata.
- ***Research works***: Additionally, the department has undertaken extensive screening of rice germplasm for cold tolerance using both morphological and molecular markers, contributing to the development of climate-resilient crop varieties.
- ***Publications***: Total papers published 5 and others 4

Research papers with NAAS Score during 2022				**Total**
< 5	5-7.5	7.5-10	> 10	
-	1	3	1	5
Book	Book chapter	Bulletin	Popular article	
1	3	-	-	4

Department: Agricultural Chemistry and Soil Science

The Department of Agricultural Chemistry and Soil Science started its journey in 1964 at Kalyani University and took its' good shape with the birth of BCKV on 1st September 1974. At present, Department offers 14 courses for Master degree and 9 courses for Ph.D. programme.

Achievements

- ***Facility development:*** Adjacent to the department, the RIDF sponsored a two-storied building of 4000 sq ft area with a sophisticated soil testing laboratory has been established along with a Mobile Soil Testing Van.

- ***Students' achievement***: In the year 2022-23, 20 and 19 students were awarded M.Sc. and Ph.D. degree, respectively; 8 UG students with specialization in the field of Soil Science (Physical Science) have qualified the JFS of ICAR in 2022, of which first three ranks were occupied by BCKV students. Four Ph.D students received UGC-NET-JRF and one received NFPWD.
- ***Research achievement***: Prepared macro and micro nutrient status map of some districts of West Bengal; Evaluated Nix-Pro color sensor and Munsell soil color variables for classifying soil types and predicting soil organic Carbon; Targeted Yield Equations developed for major crops grown in New and Old alluvial Zones and transferred to the Govt. of West Bengal
- ***Publications:*** Total papers published 24 and others 6

Research papers with NAAS Score during 2022				**Total**
< 5	5-7.5	7.5-10	> 10	
1	6	11	6	24
Book	Book chapter	Bulletin	Popular article	
-	6	-	-	6

Department: Agricultural Chemicals

The discipline of Agricultural Chemicals was very much in existence since 1970's under the then Department of Agricultural Chemistry & Soil Science, Faculty of Agriculture. The Department of Agricultural Chemicals was established in the year 2000 with the recommendation of Government of West Bengal.

Achievements

- ***Program accreditation***: ICAR Accredited PG Programme: The Department successfully maintained the ICAR-NAEAB accredited status of M. Sc. (Agri) & Ph. D. degree programmes in Agricultural Chemicals during 2022-23.
- ***Student placement***: Students are either engaged in higher study or well placed in different Universities and Institutions under Govt. and Non-Govt. sectors in various positions, viz., Assistant Professor/ Scientist/ Food Safety Officer/ Bank Officer/ Livelihood Specialist, etc.
- ***Resource persons***: Revision of ARS syllabus by Dr. R. K. Kole, Professor acted as a Member of the Sub-committee on "Basic Sciences" constituted by ASRB/ICAR for revision of ARS syllabus based on New BSMA recommendation and revised qualification.
- ***Institutional collaboration***: The Department maintained collaboration with various Research Institutions, viz., (i) ICAR: CIFRI, Barrackpore (Scientist: Dr. B. K. Das, Director); (ii) Tea Research Association, Kolkata (Scientist: Dr. B. Kanrar); and (iii) ISI, Giridih, Jharkhand (Dr. A. Mukherjee) for doctoral research programme.

- ***Revenue generation***: The Department successfully operated the Export Testing Laboratory and implemented a good number of sponsored research projects on pesticide residue analysis and generated revenue amounting to Rs. 18.6 lakh for the University.
- ***Publications:*** Total papers published 15 and others 1

Research papers with NAAS Score during 2022				**Total**
< 5	5-7.5	7.5-10	> 10	
4	1	7	3	15
Book	Book chapter	Bulletin	Popular article	
-	1			1

Department: Agricultural Extension

The Department of Agricultural Extension was established under Faculty of Agriculture, Kalyani University in 1962. In the year 1963, M. Sc. (Ag.) in the Agricultural Extension was introduced. The Department is catering courses for the graduate, post-graduate and doctoral levels.

Achievements

- ***Students performance***: Best Ph. D. Thesis Award to Dr Anwesha Mandal; Best paper Award to Amrita Sarkar in the International Conference of Green Technology, Agriculture Information Technology, Business Management and Social Sciences, 16-17 July, 2022, Organized by Research Education Solution (RES), M S Swaminathan School of Agriculture, Centurian University (2022).
- ***Students' placements***: Nine students placed in Banks, Police, ATMA and India Post.
- ***Publications*:** Total papers published 27 and others 8.

Research papers with NAAS Score during 2022				**Total**
< 5	5-7.5	7.5-10	> 10	
-	24	1	2	27
Book	Book chapter	Bulletin	Popular article	
8	-	-	-	8

Department: Agricultural Economics

The Department of Agricultural Economics is functioning as a full-fledged department since 1966 under Faculty of Agriculture at Kalyani University, and came under BCKV in 1974. The department is imparting quality teaching to meet the academic needs of the Under-graduate students of all the three faculties of our University.

Achievements

- ***Students performance***: Adrita Dam secured AIR 1st in AIEEA-PG/SRF-2022-23 of ICAR

Department: Agricultural Meteorology and Physics

Indian Council Agricultural Research sanctioned AICRP on Agrometeorology to BCKV and started in operation in 1983 and in 1998-99 academic sessions, PG programme was initiated to cater these courses.

Achievements

- ***Students' performance***: Dr. Sarath Chandran, a Ph. D. scholar bagged the PSN Sastry Best Ph. D. Thesis Award in Agrometeorology in India; Miss Trisha Manna, a Ph. D. student joined as Assistant Professor, at Neotia University; Two of our Ph. D. students were awarded UGC Single girl child fellowship.
- ***Awards/Achievements/Recognition:*** Prof. Saon Banerjee was conferred Fellow, Association of Agrometeorologists in 2022; Prof. M.K. Nanda is nominated by as member of the Expert Committee on Earth Science and Geoinformatics, DSTBT, Govt. of WB.
- ***Collaboration works***: Faculty members are engaged in collaboration with different globally acclaimed organizations like India Meteorological Department (IMD), Indian Space Research Organization (ISRO), Australian Centre for International Agricultural Research (ACIAR), Asia-Pacific Network etc. besides the All India Coordinated Research Project on Agricultural Meteorology (AICRPAM).
- ***Publications:*** Total papers published 22 and others 6

Research papers with NAAS Score during 2022				**Total**
< 5	5-7.5	7.5-10	> 10	
-	16	5	1	22
Book	Book chapter	Bulletin	Popular article	
-	2	-	4	6

Department: Agricultural Statistics

The Department of Agricultural Statistics started its journey in the year 1974. The department imparts teaching and research prospects for both UG and PG level in Statistics, Mathematics and Computer Science and Information Technology to all the students across the three faculties. The Masters Degree Programme in Agricultural Statistics was started in 1984. The department also has its own Ph.D program since 1974.

Achievements

- ***Student performance*:** AIEEA-PG/SRF-2022-23 : 01 ; ICAR- National Examinations during 2022: NET – 02
- ***Publications*:** Total papers published 6

Research papers with NAAS Score during 2022				Total
< 5	5-7.5	7.5-10	> 10	
1	5	-	-	6
Book	Book chapter	Bulletin	Popular article	
-	-	-	-	0

Department: Agricultural Entomology

The Department of Agricultural Entomology was established in 1965 under the aegis of the Faculty of Agriculture at Kalyani University. The department offers a number of courses at the postgraduate level leading to M.Sc. (Ag.) and Ph. D. Degree. The thrust areas of teaching and research are broadly grouped under economic entomology, toxicology, nematology and acarology.

Achievements

- ***Students performance*:** AIR 1 and AIR 25 in AIEEA-PG/JRF-2022-23 of ICAR; 1st position in Poster presentation under "Crop Weather and Forewarning Models" in National Conference "AGMET 2022'; Best Oral Presentation under "Crop Protection and Stress Management" in National Seminar on "Horticulture for Sustainable Development, Nutritional and Livelihood Security" at UBKV, Coochbehar.
- ***Commercial Apiculture Unit***: has been successfully functioning and produce quality honey in large amount.
- ***Publications*:** Total papers published: 39 & others: 14

Research papers with NAAS Score during 2022				Total
< 5	5-7.5	7.5-10	> 10	
4	30	2	3	39
Book	Book chapter	Bulletin	Popular article	
2	12	-		14

Department: Agronomy

The Department of Agronomy is the largest department under the Faculty of Agriculture and the university. It continued from the University of Kalyani to the newly established Bidhan Chandra Krishi Viswavidyalaya in the year 1974. The department offers Agronomy courses at the Under Graduate, Post Graduate and Doctoral Levels.

Achievements

- ***Seminar/ Conference/ Workshops attended*:** Eighteen faculty members participated in different National and International seminars, conferences in 2022, Five faculty members attended winter/ summer school or short term training programmes (online/offline) courses in 2022. Eight students received poster and oral presentation awards. After completion of PG degree, the students have joined reputed National Institutes like IARI, GB Pant University, BHU, PAU and RPAU etc.

- ***Students placement*:** Agronomy students (16) were absorbed mostly in the jobs of State Government overhead, Quarantine Directorate of GoI, KVKs, Agriculture Insurance, Nationalized and Private Banks, Agriculture Insurance officers, Corporate sector, IFFCO and FCI etc.
- ***Awards/Recognition/Fellowships:*** Prof. S.B. Goswami was entrusted with the position of Dean, F/Agriculture, and Prof. Goswami also guided the development of vocational courses in the agricultural discipline of WBSCT&VE&SD. Prof. M. Pramanick, Prof. P. Bandopadhyay acted as experts in selection committees of different universities and ICAR institutes; Prof. K. Brahmachari participated in selections held by GoWB; Prof. Mrityunjoy Ghosh bagged the CWSS gold medal for his contributions to aromatic rice science and marketing; Dr. Ratneswar Poddar and Dr. Sibajee Banerjee received young scientist award from Crop and Weed Science Society; Dr. Kanu Murmu received Innovative Teacher Award 2022 in Agronomy from International Multidisciplinary Research Foundation.
- ***External / Govt. Funded Projects***: On-going projects are as ICARDA sponsored project on 'Lentil crop for biotic and abiotic stress assessment' run by Prof. R. Nath; ACIAR funded Project on 'Cropping system intensification in the salt affected coastal saline zone of Bangladesh & India' run by Prof. K. Bramhachari; RKVY Project Dept. of Agricultural Marketing, GoWB funded "Upgradation of market-linkage network for promotion of aromatic and special rice of West Bengal, run by Prof. Mrityunjoy Ghosh; Sufal Bangla-BCKV- Govt. of West Bengal Pulse Project"Enhancing Pulses Productivity under rice-based cropping system for improvement of livelihood and nutritional security in West Bengal" run by Prof. R. Nath.
- **Publications:** Total papers published 198 & others 92.

Research papers with NAAS Score during 2022				**Total**
< 5	5-7.5	7.5-10	> 10	
45	109	35	9	198
Book	Book chapter	Bulletin	Popular article	
3	36	24	29	92

Department: Animal Science

During bifurcation of Bidhan Chandra Krishi Viswavidyalaya to establish a new University viz. West Bengal University of Animal and Fishery Sciences, the Department of Animal Science was created under the Faculty of Agriculture by Ordinance in the year 1995. This Department was established primarily to cater the teaching, research and extension in Animal Husbandry in this Viswavidyalaya.

Achievements

- ***Teaching and Research efforts***: This Department maintains a Livestock Instructional Farm with small number of different species of animals to cater practical classes, research and demonstration purposes. Recently effort has been made for the development of low-cost broiler farming. In the Livestock Instructional Farm for production of Black Soldier, fly larvae that may be considered as one of the cheap sources of protein for poultry birds and fishes. The net house for adult fly, egg collection devices, hatching unit and larvae rearing unit have been successfully developed.

Department: Genetics and Plant Breeding

Based on the recommendation of the ICAR-high power review team during the first accreditation of our university, bifurcated departments, Genetics and Plant Breeding started its journey as a single department in 2012. The main goal of the M.Sc. (Ag.) in Genetics and Plant Breeding is to train students for a variety of careers in the areas of Genetics and Plant Breeding.

Achievements

- ***Students' performance***: During 2022, there was one CSIR-SRF, one CSIR-JRF, and one NFFI-SRF. In the same year, 10 UG students received ICAR-JRF from the Plant Science section, of which four had JRF and six had NTS.
- ***Research output***: One lentil variety (BL16) with terminal heat tolerance, one Tossa jute variety (BCCO-13), and two tuberose varieties (Bidhan Snigdha and Bidhan Ujjwal) have been released by the SVRC. BCCC-1, a variety of White Jute, was registered by BCKV, through PVPFRA; Developed fast-track in vitro propagation protocols of six local potato genotypes (as per the demand of the Govt. of West Bengal), and several ornamental and medicinal plants; Field pea line IPF 2014-16 (INGR22043) showing resistance against rust has been recommended for registration by the Plant Germplasm Registration Committee (PGRC) of the Indian Council of Agricultural Research in 2022 as genetic stock; and one wild bean line (Vigna stipulacea) IC553521 (INGR22080) with a higher protein content (24.6%) has been recommended for registration by the Plant Germplasm Registration Committee (PGRC) of the Indian Council of Agricultural Research in 2022 as genetic stock.
- ***Publications*:** Total papers published 21 and others 11

Research papers with NAAS Score during 2022				**Total**
< 5	5-7.5	7.5-10	> 10	
-	9	10	2	21
Book	Book chapter	Bulletin	Popular article	
2	9	-	-	11

Department: Plant Pathology

The Department of Plant Pathology is one of the oldest and full-fledged departments under the aegis of Faculty of Agriculture under Kalyani University since 1965. It caters the courses leading to M.Sc. and Ph. D. in the Plant Pathology since 1974 at BCKV.

Achievements

- ***Facility developed:*** The teachers of the Department developed DNA finger printing facility centre for root and tuber crops, maintained large number of germplasms of maize, rice, tuber crops, banana, mango, jackfruit and vegetables
- ***Students' achievement:*** Ph. D. Level seven students of the Department attended IPS East Zone meet cum National Symposium, Kalyani, Nadia. Of these, two (Ms. Shinee De and Ms. Anindita Patwari) and one student (Ms. Susmita Pati) got 1st and 2nd poster presentation award and one student (Mr. Krishnendu Kundu) got prize for best oral presentation. Two students got University Research Scholarship and three students got SVMCMS scholarship.
- ***Faculty recognition/ awards:*** Prof. J. Tarafdar was awarded the Fellow of Indian Virological Society and became a member of the International Union of Microbiological Society. Dr. R. Mondal was the recipient of the Netaji Subhas ICAR International Fellow; Dr. S. Debnath received best poster presentation award at the IPS East Zone Meet cum National Symposium, Kalyani and at the 8th International Conference at SKNAU, Jobner, Rajasthan.
- ***Outreach program***: Famers field demonstration was 45 ha, 400 farmers were benefitted; eight radio talks were given by 3 teachers (Dr. D. Misra – 3, Dr. Poly Saha – 3 and DR. J. Tarafdar -2) and two T.V. programmes were attended by two teachers (Dr. D. Misra and Dr. S. Debnath).
- ***Publications*:** Total papers published 43 and others 35.

Research papers with NAAS Score during 2022				**Total**
< 5	5-7.5	7.5-10	> 10	
10	24	7	2	43
Book	Book chapter	Bulletin	Popular article	
1	16	6	12	35

Department: Plant Physiology

The Department of Plant Physiology was started under the Faculty of Agriculture since 15th February, 1999 consequent upon the quadri-partitioning of erstwhile the Department of Genetics and Plant Breeding. Since inception, the Department is actively engaged in catering a number of advance courses on Crop Physiology at Ph.D. in addition to the courses in the UG (both Agriculture and Horticulture Faculties) and Master degree levels.

Achievements

- ***Publications*:** Total papers published 2 and others 1

Research papers with NAAS Score during 2022				Total
< 5	5-7.5	7.5-10	> 10	
0	1	0	1	2
Book	Book chapter	Bulletin	Popular article	
0	1	0	0	1

Department: Seed Science and Technology

The Department of Seed Science and Technology is a full-fledged department under the aegis of the Faculty of Agriculture. The Department of Seed Science and Technology was created newly out of the Department of Genetics and Plant Breeding, which started functioning with effect from February 06, 1999. This department also successfully fulfilled the UG academic requirement of College of Agriculture, Burdwan and Bankura.

Achievements

- ***Publications*:** Total papers published 19 and others 5.

Research papers with NAAS Score during 2022				Total
< 5	5-7.5	7.5-10	> 10	
	18	-	1	19
Book	Book chapter	Bulletin	Popular article	
1	4	-	-	5

Department: Soil and Water Conservation

The department of Soil and Water Conservation was established in the year 1996. The department caters teaching programme in UG, PG and Ph.D. level.

Achievements

- ***Research output***: Pitcher pot irrigation standardization for vegetables and fruits crops under alfisol soil of West Bengal.
- ***Publications*:** Total papers published 01 and others 04.

Research papers with NAAS Score during 2022				Total
< 5	5-7.5	7.5-10	> 10	
-	1	-	-	1
Book	Book chapter	Bulletin	Popular article	
-	4	-	-	4

STUDENT READY PROGRAMMES

A. Rural and Agricultural Work Experience (RAWE)

As per the recommendation of the Fifth Deans' Committee of the Indian Council of Agricultural Research, the Rural Agricultural Work Experience (RAWE) programme was carried out at Bidhan Chandra KrishiViswavidyalaya (BCKV) in the seventh semester of B.Sc. (Ag.) Hons. during 2022-23. A total of 172 students from the three campuses of BCKV (Mohanpur, Burdwan, and Susunia) participated in the RAWE course, a six-month village-based program from the middle of August 2022 to the middle of February 2023.The RAWE programme was structured under three themes as-

Theme-I: Socio-economic and agro-ecosystem analysis of villages

Theme-II: Diagnostic analysis of insects, diseases, weeds, soil and water qualities

Theme-III: Studies on farming system analysis, crop weather, farm improvement plan and agro/rural enterprises

Following the four-weeks orientation programmes, the students were attached to Krishi Vigyan Kendras at Gayeshpur (District Nadia) and Hooghly (District Hooghly), Regional Research Stations at Jhargram (District Jhargram) and Kakdwip (District 24 Parganas South), Regional Research Sub-Stations at Sekhampur (District Birbhum) and Regional Research Sub-Stations at Raghunathpur (District Purulia) under BCKV and also the teaching campuses at Mohanpur, Burdwan and Susunia for conducting the field studies in twelve selected villages situated at various agro-climatic zones of the state. The students had interacted with villagers/farmers, collected information on socio-economic conditions of villages, farming systems, farm enterprises and other relevant areas through participatory mode, and subsequently, developed the farm improvement plan for a village.

The performance of the students was evaluated in different phases based on each thematic area through presentation, discussion and question-answering. The programme ended with the submission of final reports by the students, following the group discussion and central viva examination conducted by external examiners. The arrangement and monitoring of the entire RAWE programme was done by a Central RAWE committee consisting of RAWE Coordinator, RAWE Advisor and other teacher members nominated by the Dean, Faculty of Agriculture. For the academic session 2022-23 Prof. Dhananjaya Dutta, Department of Agronomy was the Coordinator of RAWE programme.

Village and Industry Studies by students-farmers interaction under RAWE

RAWE students at villages

Farmer's Field visit by RAWE Students

Farm household studies

Crop studies in farmers field

B. Experiential Learning Programme (ELP)

As a part of under graduate programme the students enrolled in "Experiential Learning Programme (ELP)", an important component of the 'Student READY' as a flagship scheme of the Indian Council of Agricultural Research during 8th semester following the guidelines of 5th Dean Committee with an intention to develop manpower that can help in making farming a profitable venture. ELP is an integrated learning system of skill and knowledge wherein the students are trained for entrepreneurship development after completing their degree programme. The EL modules operate in business or in skill development mode. Experiential Learning Units (ELUs), in business mode are based on the concept 'Earning by learning' by sharing 50% profit with the students. The following ELP modules have been offered by the Faculty of Agriculture, Mohanpur during 2022-23.

1. ELP 451: Production of Bio-agents and Botanical pesticides

The ELP 451 module on 'Production of Bio-agents and Botanical pesticides' was conducted in skill mode under the supervision of Dr. B. N. Panja, Department of Plant Pathology. Three (3) students were trained under this ELP module. The students were trained for isolation and purification of bio-control agents (BCA) and plant pathogens, determination of antagonistic potential of BCA, talc-based mass production technique of BCA, and its economics. The students were also trained for processing and extraction of plant for Bioactive Principles, development of Emulsifiable Concentrate (EC), formulation technology for botanical pesticides and quality control of EC, formulation technology for botanical pesticides; quality control of EC formulations.

2. ELP 452: Commercial Seed Production

The ELP 452 module on 'Commercial Seed Production' was conducted in skill mode under the supervision of Prof. P. Chakraborty, Department of Seed Science & Technology. Thirty (30) students were trained under this ELP module. The students were trained for Seed production technique with quality maintenance, processing, and storing program. Seed marketing is also included through distribution channel.

3. ELP 453: Mushroom Cultivation

The ELP 453 module on Mushroom Cultivation was conducted in skill mode under the supervision of Dr. Rishu Sharma, Department of Plant Pathology. Thirty five (35) students were trained under this ELP module. The students were trained for Mushroom culture Preparation, Mushroom Spawn Preparation, and Mushroom cultivation in mushroom house and marketing.

4. ELP 454: Soil, Plant and Water Testing

The ELP 454 module on Soil, Plant and Water Testing was conducted in skill mode under the supervision of Prof. H. Saha, Department of Agricultural Chemistry and Soil Science. Thirty-five (35) students were trained under this ELP module. The students were given hand-on experience on soil and water sampling from field, preservation of samples, chemical analysis of soil, plant and water as well as preparation of report. The students got expose to the process of making Soil Health Card and recommendations made through soil health card.




5. ELP 455: Commercial Bee Keeping

The ELP 455 module on Commercial Bee Keeping was conducted in commercial mode under the supervision of Prof. A. Pramanik, Department of Agricultural Entomology. Thirty-five (35) students were trained under this ELP module. The students were given hand-on experience rearing of honey bees, collection of honey, and management of honey bees during off period, packaging and marketing of honey. During the ELP programme the students sell their product in the local market.

6. ELP 456: Organic Production

The ELP 456 module on Organic Production under the supervision of Prof. M. Pramanik, Department of Agronomy. Thirty-four (34) students were trained under this ELP module. The students were given hand-on experience on production technology of vermiculture and vermicompost and exploring its market chain. The students were also trained with production of process of Jibamrit, Panchagabya, Amrit pani, Bijamrita, Nimastra, liquid FYM, plant based liquid manure, biodung compost etc.

7. ELP 457: Commercial Sericulture

The ELP 457 module on Commercial Sericulture was conducted in skill mode under the supervision of Prof. A. K. Maiti, Department of Agricultural Entomology. The ELP module was conducted in skill mode. Thirty-six (36) students were trained under this ELP module. The students were given hands-on experience in rearing of silkworms on mulberry leaves in controlled environments. The students were also taught about different steps of cocoon processing, reeling, and dyeing etc.

8. ELP 459: Biofertilizer production and marketing

The ELP 459 module on Biofertilizer production and marketing was conducted in skill mode under the supervision of Prof. S. C. Kole, Department of Agricultural Chemistry and Soil Science. The ELP module was conducted in skill mode in the Sample Survey and Mass Production (SSMP) Unit of the university. Twenty-six (26) students were trained under this ELP module. The students were given hands-on experience in production, packaging and marketing of biofertilizers of different species.

Vermi compost structure

Vermi compost preperation

1st Batch of ELP students (2022) on Bio-fertilizer Production & Marketing

Exposure visit at M/s. Lila Agrotech Pvt. Ltd. (24 Pgs N)

Demonstration on biofertilizer at SSMP Unit

Mass culturing of bacterial culture in Fermenter

Blending & packaging of biofertilizer

Biofertilizers produced by ELP Students

Award/Recognition/ Fellowship of students

The students from the Faculty of Agriculture from all three campuses showed outstanding performance in the All India Entrance Examination for Admission [AIEEA] in ICAR institutes and SAUs with 69 students securing national ranks. Three students got ICAR SRF, four students joined in different international institutes of repute like, Lincoln University (USA), University of Manitoba (Canada), Oklahama State University (USA) for continuing research and a good number of students joined Management Institutes and joined job in Govt. and Non-Govt. agencies. A comprehensive list of students showing outstanding performance at national and international level is given here under-

a. List of Successful students in **AIEEA-PG for 2022-23** from Faculty of Agriculture:

Name	Rank (Category)	Name	Rank (Category)
Agronomy			
1. Sayantika Sarkar	3	2. Anasua Chatterjee	163 (EWS 21)
3. Susmita Sarkar	128 (SC 6)	4. PreronaSaha	182 (SC 12)
5. Shrestha Das	154 (SC 11)	6. Mainak Chatterjee	411
7. PriyaDhara	158 (EWS 19)		
Entomology & Nematology			
8. Sourav Chakrabarty	1	9. Bappaditya Mandal	45
10. Suman Natua	4 (SC)	11. Suranjana Sahu	136 (EWS 30)
12. DebanjanBasu Roy	5	13. Ankana Halder	168
14. Debabrati Roy	7	15. Pritam Bera	179 (OBC-B 79)
16. Sharmistha Mandal	15	17. Smritikana Bhattacharyya	245 (EWS 44)
18. Mosaddik Miah	16 (OBC-A 7)	19. Sunita Hansda	246 (ST 13)
20. SourenMondal	25 (OBC-B 13)	21. Arnab Singha	248 (SC 46)
22. Nayanika Paul	38	23. Saptarshi Chakraborty	300
Physical Science			
24. PurbasaKole	1	25. Srabasti Urbi	35
26. Chandra Saha	2	27. Anirban Barik	36 (EWS 3)
28. Tripti Pal	3 (EWS-1)	29. Debnath Sarkar	43
30. Supriyo Dhara	8	31. Shweta Nidhi	66
32. Tanushree Ghosh	12	33. Subhradip Saha	81 (EWS 8)
34. Saikat Maity	14	35. Soumya Roy Choudhury	94
36. Sayantani Purkait	20	37. Partha Dey	200 (OBC-B 92)
38. Sayantan Mandal	25	39. Srijayee Hazra	290 (OBC-B 138)

Name	Rank (Category)	Name	Rank (Category)
40. Subhajit Rakshit	28	41. Sayantan Mandal	342 (SC 25)
42. Argha Mandal	32	43. Anshuman Roy	571 (SC 68)
Plant Biotechnology			
44. Arpita Das	6	45. Jagabandhu Pan	15 (EWS 2)
46. Haimanti Nath	10	47. Swarnabha Sanyal	37
48. Soumili Nayak	11	49. Ananya Sahu	43
Plant Science			
50. Pratap Ghosh	41 (EWS 8)	51. Dipannita Guchhait	277 (EWS 47)
52. Abhijit Pal	69 (OBC-B 29)	53. Olive Ghosh	281 (OBC-B114)
54. Ritama Kundu	76 (EWS 14)	55. Tripti Ghosh	372 (OBC-B158)
56. Samrat Rej	156 (EWS 29)	57. Riya Biswas	649 (PWD 4)
58. Arkadeep Sarkar	169	59. Suhadip Dakua	659
60. Shilpa Mukherjee	235 (EWS 40)	61. Tamalika Maity	751
62. Bibswan Rath	263	63. Ajay Murmu	1536(ST 64)
Social Science			
64. Debarchan Bhawal	154	65. Tanmoy Das	427 (SC 49)
66. Sagen Mandi	194 (ST 2)	67. Himadri Barman	580 (SC 78)
68. Anirban Mandal	286		
Statistical Science			
69. Dipankar Mandal	57 (SC 5)		
Horticulture			
70. Taniya Shit	1 (EWS 1)	71. Ayantika Maity	51 (EWS 11)
72. Anupam Saha	6 (OBC-B 2)	73. Pranab Nirmalya Das	1806 (SC 270)
74. Nabakumar Bhunia	35 (EWS 9)	75. Somu Garai	590 (OBC-B238)
Agricultural Engineering			
76. Bishal Das	25	77. Abu Sayed SK	320 (OBC-A129)
78. Subhadip Mondal	83 (EWS7)	79. Subha Mondal	279 (SC 34)
80. Sabyasachi Ray	84	81. SusantaSaren	303 (ST 31)
82. Biman Majumdar	152 (SC 13)	83. Souav Mondal	370 (OBC-A144)

b. List of Candidates qualified and Ranked in AIEEA-Ph D/SRF for 2022-23 from Agriculture Faculty, BCKV

Sl No.	Name	Subject	Rank
1.	Adrita Dam	Agril. Economics	1
2.	IshitaSamai	Plant Physiology	13
3.	RupamMondal	Agronomy	19 (SC 2)

c. List of Candidates admitted to reputed Institutes for higher studies in 2022-23

SN	Name	Subject	Institute	Country
1.	Arindam Mandal	Sustainable Agriculture	Lincoln University	USA
2.	Bani Kumar Biswas	Sustainable Agriculture	Lincoln University	USA
3.	Anirup Sengupta	Genetics, Plant Breeding	University of Manitoba	Canada
4.	Daruvuri Sri Mounika	Crop Science (Ph D)	Oklahama State University	USA
5.	Baisakhi Bala	Agril. Food Engg	IIT, KGP	India
6.	SankhadeepBakshi	Biotechnology	IIT, Roorkee	India
7.	Tantu Mandal	Agril. Food Engg	IIT, KGP	India
8.	Sajal Das	Industrial and Systems Engineering	IIT, KGP	India
9.	ArkaPramanik	Agril. Food Engg	IIT, KGP	India
10.	Dipankar Ghosh	Industrial and Systems Engineering	IIT, KGP	India
11.	Rohit Ghosh	Technology and Development, CITARA	IIT, Mumbai	India
12.	Shreya Sarkar	Agril. Food Engg	IIT, KGP	India
13.	Moumita Roy	Biotechnology	IIT, Mumbai	India
14.	ManasKundu	Agril. Food Engg	IIS, Bangalore	India
15.	SoumydebBatabyal	Biomedical Enginering	IIT, Bombay	India
16.	Souptik Nag	Financial Management	IMT, Hyd'bad	India
17.	Arpan Saha	AgriBusinesMgt	NIAM, JAIPUR	India
18.	Souradeep Sarkar	AgriBusinesMgt	IIM, Ahmedabad	India
19.	Pushpendu Ghosh	AgriBusinesMgt	IIM, Ahmedabad	India
20.	Subharthi Mishra	AgriBusinesMgt	IIM, Ahmedabad	India
21.	Saroj Laha	Genetics and Plant Breeding (Ph.D.)	National Institute of Plant Genomic Research, Delhi	India

Details of Events/ Celebration of Days of National and University level Significance from January 2022 to December 2022

SN	Events	Date
1.	Birthday Celebration of Netaji Subhas Chandra Bose	23rd January, 2022
2.	Republic Day Celebration	26th January, 2022
3.	Essay Competition on World Water Day held at Gayeshpur, BCKV	22nd March,2022
4.	ICAR- AICRP on Agroforestry, BCKV Centre organized 'Tree Plantation Campaign' at NiveditaGramin Karma Mandir (a house of orphans and destitutes) at Manikpara, Jhargram, on World Environment Day,	5thJune, 2022
5.	Fruit Diversity Festival was organized by ICAR-AICRP on Fruits, Mohanpur Centre	17th June, 2022
6.	Birthday Celebration of Dr. Bidhan Chandra Roy	1st July, 2022
7.	Independence Day Celebration	15th August, 2022
8.	University Foundation Day Celebration	1st September, 2022
9.	World Coconut Day was organized by ICAR-AICRP on Palms at Horticultural Research Station, Mondouri, BCKV	2nd September, 2022
10.	Teachers' Day Celebration	5th September, 2022
11.	Observance of Kharif Forage Day" at Central Research Farm, BCKV, Gayeshpur, Nadia.	9thSeptember, 2022
12.	Birthday celebration of Father of Nation, Mahatma Gandhi	2nd October, 2022
13.	World Soil Day Celebration	5th December, 2022

Details of Lectures delivered by Eminent Scientists

- Prof. Tapas Kuamr Biswas, Ph D., FIOBB, MSSA Sr. Scientist, Australian National University Cannberra Act, 2601 from Australia delivered a lecture on "Aqua Watch Australia Mission: links to India for better water quality" on 8th June, 2022.
- Dr. Suvobrata Chakravarty, Department of Chemistry and Bio-Chemistry, South Dakota State University, Brookings, USA, delivered a lecture entitled An "Arg to comprehend the human Proteome'' on 5th August, 2022.

Eminent scientists Dr. Suvobrata Chakravarty delivered distinguished lecture at BCKV during 2022

Eminent scientists Prof. Tapas Kumar Biswas delivered distinguished lecture at BCKV during 2022

Visit of Shri Sobhandeb Chatterjee, Hon'ble MIC, Agriculture & Shri Pradip Mazumdar, Hon'ble MIC, Panchayat and Rural Development GoWB at BCKV

College of Agriculture, Bardhaman

The foundation stone of the College of Agriculture was laid by the Hon'ble Chief Minister of West Bengal, Smt. Mamata Banerjee on the auspicious day of July 9, 2014 as an extended campus of Bidhan Chandra Krishi Viswavidyalaya to fulfil the growing need in agricultural education and research, with the help of Govt. of West Bengal. The college has developed good residential (Hostel) facilities for boys and girls as well as laboratory facilities on 73 acres of land during this period establishing its new campus at Agriculture Farm, Gate No.1, Kalna Road, Burdwan, PIN-713101, West Bengal. The college has an Instructional cum Research Farm on 50 acre land where crop museum, demonstration plots, IFS model, seed production unit, medicinal and aromatic plants garden are being maintained for practical demonstration and research purpose. The College has one Central Laboratory and five well equipped laboratories of different departments e.g., Plant Pathology, Agril. Entomology, Agricultural Chemistry and Soil Science including Bio-chemistry as well as Agronomy and Horticulture with all necessary equipments, instruments and appliances. In 2022-23, the central laboratory has been more equipped with installation of Atomic Absorption Spectrophotometer (AAS), UV vis Spectrophotometer and Nitrogen digestion distillation unit.

Achievements

- Eleven students from COA, Burdwan Campus achieved success in AIEEA PG for the year, 2022-23 with good national rank and took admission in reputed institutes like, IARI, New Delhi, NIBSM, PAU (Ludhiana), UAS-Bangalore Navsari Agricultural University (Gujrat), OUAT (Bhubaneswar) and RPCAU (Samastipur).
- Dr. Sujit Hensh obtained Ph. D. degree from IIT-Kharagpur on Development of a Self-propelled Unmanned Precision Hill-top Wetland paddy seeder.
- Dr. L. C Patel Received'Best Oral Presentation Award' and 'Outstanding Teacher Award' on Biotic Science Congress & International Conference on Recent Advances in Agricultural, Biological and Applied Sciences Research' by Society for Biotic and Environmental Research (SBER), Tripura

Student READY initiative

RURAL AND AGRICULTURAL WORK EXPERIENCE (RAWE)

The RAWE progromme of the college was conducted by central Coordinating Cell with Dr. L. C. Patel as local coordinator. Under the RAWE programme the students were given exposure to field and village experience at Naopara village (Burdwan 1I block), KVK-Nadia (Gayeshpur), KVK-Hooghly (Chinsurah) and RRS Jhargram in the year 2022-23, 12 students from main campus Mohanpur were allotted in our college for conducting their RAWE activities.

EXPERIENTIAL LEARNING PROGRAMME (ELP)

As a part of curriculum, the two modules of ELP namely (a) Vermicomposting (Coordinator: Dr. Soumen Bera) and (b) Mushroom production (Coordinator: Dr. Poly Saha & Dr. Sibsankar Das) were conducted at Bardhman campus, both in Skill mode. During the programme the students were trained to conduct field/market survey for sourcing for inputs, salebility of products and risk assessment. The students were trained for skill development in making production plan, quality control packaging and marketing as well as maintaining accounts. The profits made through the ELPs are utilized for maintaining the set-up and purchase of inputs.

CO-CURRICULAR ACTIVITIES

National Service Scheme (NSS): The NSS unit of the campus is being coordinated by Dr. Sibsankar Das. The students participated in different developmental activities by organizing short duration camps in and outside campus on various themes like, Swachh Bharat Pakhwara, Awareness programme on blood donation, Parthenium awareness, mosquito borne diseases awareness, Thalassaemia awareness. Observation of significant days e.g., National Youth Day, Birthday celebration of Dr. Bidhan Chandra Roy, International Day of Yoga, Independence Day, Republic Day, University foundation day, College foundation day, World Environment Day etc. The students also organized Quiz, rangoli, debate, cultural, sports and essay writing competition under NSS programmes.

Sports and cultural activities: The College provides facilities of indoor games like Table Tennis, Carrom and outdoor games like cricket, football, volleyball, Badminton etc. besides light gym instruments. The students also took part in the University Annual Sports organized at Main Campus Mohanpur. The College Social was organized on 25th July, 2022 where the students organized different cultural programmes.

COA, Burdwan Social: 25th July, 2022

Annual Sports at COA, Burdwan (September 04, 2022)

College of Agriculture, Bankura

The College of Agriculture situated at Susunia in the district of Bankura (23.19^0N and 86.57^0E) was established on 20th July 2015 with an intake capacity of 32 students in each batch. The college is fully residential, with one boys' hostel (*Boshi Sen Abash*), one girls' hostel (*Jhumur Abash*), a playground, and an instructional farm, all inside the college campus. The college has a well-maintained farm unit where different seasonal crops are grown as teaching resources for practical classes for students of different semesters. A gene bank of different fruit and medicinal plants is being developed at the farm of the college, Chhatna, Bankura. Approximately 186 rice landraces of diverse origins have been evaluated and characterized as germplasm. The college has developed a good reputation for its students' performance at the national level.

Achievements

Four students succeeded in achieving national rank in AIEE, one student got admission in IISc, Bengaluru and one in IIT, Bombay through GATE/similar admission test.

Facilities Developed

The College building has well-equipped classrooms, Laboratories, Seminar rooms, and library facilities. The College of Agriculture Bankura establishment was shifted from the old buildings where it was started temporarily to the new campus. The new building has four large classrooms, two examination halls, one seminar hall, one library room, seven laboratories cum teachers' chambers, an Office Hall, and other required establishments. During 2022-23 several new instruments, such as a BOD incubator, Laminar airflow cabinet, Cooling centrifuge, C-H-N-S analyzer, Atomic Absorption Spectrophotometer, Nitrogen cum protein analyzer, UV spectrophotometerhave been purchased for the Central Instrumentation Laboratory under the RKVY Central instrumental Facilities.

Student READY initiative

***RURAL AND AGRICULTURAL WORK EXPERIENCE* (RAWE)**

The college's RAWE program was conducted by the Central Coordinating Cell, with Mr. Tarasankar Murmu as the local coordinator. A total of 25 students of 7th semester participated in the RAWE program during the 2022-23 academic year. They started their program in Bishkodar village, Jhunjka Gram Panchyat, Chhatna Block, Bankura, and conducted a detailed study of the available crop diversity of the locality and other resources and enriched themselves through participatory learning in the villages.

EXPERIENTIAL LEARNING PROGRAMME (ELP)

As a part of curriculum, the two modules of ELP namely (a) Commercial Seed Production (Coordinator: Dr.T. Biswas) and (b) Organic Production (Dr. A. Hansda) were conducted at Bankura campus, both in Skill mode. Under Commercial seed production module, the students were trained to produce seeds of sesame following improved methods and estimate the expenditures and profits and anlyze the existing market chain. Under organic production module the students were given field oriented hands-on training on production of okra and cowpea using Organic inputs like biofertilizers, FYM, and following and organic approach for controlling pests and diseases.

Co-curricular activities

National Service Scheme (NSS): Dr. Mrinmoy Mondal coordinates the NSS unit on campus. The students participated in different developmental activities by organizing short-duration camps on various themes, both on and off campus. As part of these activities, the students distributed books to poor students at the local primary school in Bishkadar village on Children's Day, conducted campus cleaning under Swachh Bharat Pakhwara, planted fruit trees, and cleaned roadsides. Students also organize special programs to celebrate significant days, such as National Youth Day, Birthday celebration of Dr. Bidhan Chandra Roy, International Day of Yoga, Independence Day, and Republic Day.

Distribution of books to the kids of Bishkadar Village Primary School (NSS activities)

Plantation programme (under NSS activities)

Sports and cultural activities: The College provides facilities of indoor games like Table Tennis, Carrom and outdoor games like cricket, football, volleyball, Badminton etc. The students also took part in the University Annual Sports organized at Main Campus Mohanpur.

Games and sports activities of the students at College of Agriculture Bankura campus

FACULTY OF HORTICULTURE

The Faculty of Horticulture was established in 1996 by the Government of West Bengal, following the upgradation of the former Department of Horticulture under the Faculty of Agriculture. It currently comprises five specialized departments: Fruit Science, Vegetable Science, Floriculture and Landscape Architecture, Plantation, Spices, Medicinal and Aromatic Crops, and Post-Harvest Technology. The Faculty offers a four-year (eight-semester) B.Sc. (Hort.) Hons. program, a two-year (four-semester) M.Sc. (Hort.) degree, and a Ph.D. program with a minimum duration of six semesters and a maximum of ten. Committed to academic excellence, the Faculty regularly updates its curriculum in line with ICAR guidelines. The current undergraduate syllabus, aligned with the 6th Deans' Committee recommendations, has been in effect since 2022.

Department: Fruit Science

The full-fledged department of Fruits and Orchard Management was created in the year 1996 with the upgradation of the department of Horticulture to the level of Faculty of Horticulture consisting of five separate departments. The departmental research work (PG and Ph.D.) are mainly carried out at the Horticulture Research Station, Mondouri on 20 fruit crops, the thrust areas being germplasm conservation and utilization and standardization of production technologies. Impetus to the research activities on different aspects of fruit crops came with the establishment of two centres of the All India Coordinated Project, I.C.A.R. on Tropical fruits and Sub-tropical fruits which later merged as one project, All India Coordinated Project on Fruits, being operative at Horticultural Research Station, Mondouri, Regional Research Station, Gayeshpur and Banana Resource Centre, Mondouri.

Achievements

SRF (without Fellowship): 02; JRF (without Fellowship): 02; NTS: 02; 1st Fruit Diversity Fair at BCKV, Mohanpur on 17 June, 2022 on behalf of ICAR-AICRP on Fruits; Best Oral Presentation Award: 01; Best Master's Thesis Award: 01; Innovative Article award: 01; Budding Young Horticulturist Award: 01; Young Researcher of the Year Award :01

Department: Vegetable Science

Creation of the Department of Vegetable Science in the year 1996 under the Faculty of Horticulture has brought about a paradigm shift in academic activities and research works on vegetable crops with the establishment of well-equipped laboratory, polyhouse, net house and field facilities. A good number of research projects have been implemented by several faculty members of the Department. Well-developed protected structures and laboratories are being utilized by the students of the Department of Vegetable Science as well as other Departments of the University to pursue different academic programmes.

Achievements

- Development, release and notification of brinjal variety Bidhan Suphala,
- Maintenance of wide array of germplasm base including mutant genotypes of many vegetable crops
- Maintenance of crop wild relatives of tomato, brinjal, okra
- Development of detailed protocol for applied mutagenesis and isolation of promising mutants of tomato, bitter gourd, snake gourd, okra, and fava bean;
- Standardization of soil-less technology of growing many exotic vegetables; standardization of low cost poly house technology for raising different high value vegetable crops,
- Standardization of technologies like nutrient management, water management, weed management, pollination management for sustainable production of vegetable crops under open field condition.

Department: Floriculture and Landscape Architecture

Flowers are high value commodities used in various purposes globally like social activities, in industries as essential oils, dry flowers and foliage, dry natural dye extraction etc. Cultivation of flowers provides opportunity to farmers for better social living and more harvest as well as more profit per unit area. During last 15 years, floriculture has received high interest in India from the researchers, policymakers, agricultural and horticultural planners and the growers of ornamentals. Enhancements in per capita income and rapid urbanization have led to increased demand for flowers and other ornamentals. This department and was established from the erstwhile horticulture department in September, 1996. The departmental research work (PG and Ph.D.) are mainly carried out at the Horticulture Research Station, Mondouri on different ornamental crops particularly gerbera, chrysanthemum, rose, marigold, tube rose, orchids, foliage plants etc. and the thrust areas being germplasm conservation and evaluation, standardization of production technologies under both open field and protected condition. Impetus to the research activities on different aspects of flower crops came with the establishment of the All India Coordinated Project on Floriculture at HRS, Mondouri. Establishment of 'Model Centre on Floriculture Excellence' through RKVY project at Mondouri has opened a new horizon of commercial floriculture.

Achievements

- Organized National Symposium on Ornamental and Edible Horticulture: Emerging challenges and sustainable goals" is being organized by the Department of Floriculture and Landscaping, Faculty of horticulture in partnership with ISOH, ICAR-IARI during 21-22nd February 2022.
- Best Oral Paper: 01

Department: Post Harvest Technology

The Department of Post Harvest Management (erstwhile Department of Post Harvest Technology) was initiated in 1996. Besides catering to the Master's and Ph.D. degree programme, the department also implemented three research projects funded by BARC, Agriculture Marketing, Govt. of West Bengal, RKVY, Govt of India and International Institute like, ICARDA. The department is well connected with the rural women in particular for extension activities pertaining to low cost processing technology and value addition for fruits, vegetables and flowers.

Achievements

- Developed total 7 technologies ready to transfer at farmers field
- Conducted total 5 training programme with the farmers
- Lead Speaker: 1
- Projects ongoing: 3
- Chairman of the Expert Committee on Agriculture under the Department of Higher Education, Science & Technology and Biotechnology (DHESTBT), Govt. of West Bengal from 2017 to 2023
- Best paper award: 1
- Organised an International Webinar (E-Conference) on 'Fruits, vegetables and tropical tubers in shaping global food and nutrition security' in collaboration with the Institute of General and Physical Chemistry, Belgrade, Serbia on 12th November, 2022.

Department: Plantation, Spices, Medicinal and Aromatic crops

Creation of the Department of Spices and Plantation Crops in the year 1996 under the Faculty of Horticulture (Later renamed as the Department of Plantation, Spices, Medicinal and Aromatic Crops) has brought about a radical dent in academic activities and research works on Plantation, Spices, Medicinal and Aromatic crops with the establishment of basic laboratory and field facilities. Some adhoc research projects including 3 AICRPs have been implemented and successfully progressed by several faculty members of the Department. Field and laboratories are being utilized by the students of the Department as well as other Departments of the University to pursue different academic programmes.

Achievements

- Development, release and notification of one cashew variety

Research activities of Dept. Vegetable Science

Research Activities of Dept. Floriculture and Landscape Architecture

Research activities of Dept. Plantation, Spices Medicinal and Aromatic Crops

STUDENT READY INITIATIVE

RURAL AND HORTICULTURAL WORK EXPERIENCE (RHWE)

The RHWE progromme of the college was conducted by central Coordinating Cell with Mr. Tapas Choudhury as local coordinator. A total 25 students of 7th semester have participated in the RHWE program during 2022-23 academic years. They have started their program in Goragachha village and made detailed study of the available horticultural crop diversity of the locality and others resources and enriched themselves through participatory learning in the villages.

EXPERIENTIAL LEARNING PROGRAMME (ELP)

Experiential Learning Units (ELUs), running in business mode have implemented the concept 'Earning by learning' by sharing 50% profit with the students. The concept 'Earning by learning' in ELP has gained popularity among the students, and some students trained in EL units, are trying to develop their own enterprise. The EL Units namely "Processing of fruits and vegetables for value addition" and 'Commercial Horticulture' under the Faculty of Horticulture are functioning in business mode with 50% profit sharing for full involvement of the students in the production system and to encourage them to become job provider rather than job seeker.

Pasteurization unit, Automatic bottle filling machine, Lime-ginger RTC and Tomato ketchup prepared by ELP students

FACULTY OF AGRICULTURAL ENGINEERING

Faculty of Agricultural Engineering with B. Tech. (Agricultural Engineering) program started its journey in the year 1996 with four Departments, namely Farm Machinery and Power, Soil and Water Engineering, Post Harvest Engineering and Food Engineering. The degree program integrates engineering and agricultural science knowledge and skill to develop technology and/or processes to raise production and productivity of agriculture and other farm produce through efficient and sustainable utilization of natural resources. The specific activities include, efficient utilization of agricultural inputs through improved implements and machinery ensuring timeliness in farming operations (mechanization), reducing drudgery in agriculture and improving the quality of farm produce (processing and value addition). The agricultural engineering education addresses issues relevant to social and technological development of the farmers. The goal of the Faculty of Agricultural Engineering is to educate students in the field of engineering so as to prepare them for careers in agricultural engineering in which they will become leaders in industry, the profession and to conduct quality research by applying engineering principles to solve problems of agricultural system.

Faculty of Agricultural Engineering

Achievements

The B.Tech. (Agricultural Engineering) students qualified the following prestigious examinations for carrying out their higher study in premiere institutes of India with Fellowships.

- GATE (Graduate Aptitude Test in Engineering) qualified = 6 students
- ICAR-JRF (Junior Research Fellowship) qualified = 6 students
- Jobs = 4 students

Student READY Programme

B.Tech (Agricultural Engineering) students are sent for two In-plant trainings to the recognized training institutes of India each of one months at the end of 4th Semester and 6th Semester respectively. During 7th Semester, they carry out 10 weeks off campus Internship/Training in various Govt. or Private organizations. Also they are involved in 10 weeks on-campus ELP (Experential Learning Programme) programmes. The details of the institutes with which students are attached for training/ internship are given below.

B. Tech (Agril. Engg) – 5th Semester
Course No. FAE- 351: In-plant Training-I

Group	Institute/Organization
I	Southern Region Farm Machinery & Testing Institute, Anantapur (A.P)
II	Central Farm Machinery Training & Testing Institute, Budni, M.P.
III	Northern Region Farm Machinery Training & Testing Institute, Hisar, Haryana

B. Tech (Agril. Engg) – 7th Semester
Course No. FAE- 473 : In-plant Training-II

Group	Institute/Organization
I	Indian Institute of Soil & Water Conservation, Sunabeda, Odissa (ICAR Institute)
II	NINFET, Kolkata (ICAR Institute)

B. Tech (Agril. Engg) – 7th Semester
Course No. FAE-471: Industrial Attachment/ Internship
(Student READY for 10-Weeks off Campus)

Group	Institute/Organization
I	SPMU, WBADMIP, Ultadanga, Kolkata
II	Office of E.E., DPMU, Administrative Building, Barasat
III	Office of E.E., ITI Campus, Howrah
IV	Office of E.E., DPMU, Jalasampad Bhaban, Hoogly

B. Tech (Agril. Engg) – 7th Semester
Course No. FAE-472: Experiential Learning
(Student READY for 10-Weeks on Campus)

Group	ELP Modules
I	Maintenance and custom hiring of Farm Machineries & Equipments.
II	Design, fabrication and testing of farm machineries.
III	Drip fertigation to fruit crops for better yield and economy.
IV	Model Rice Based Agro-Processing units.

Department: Farm Machinery and Power

The mandate of the department is to improve application of farm machinery and power systems in the field of agriculture for improving the efficiency of different inputs, reducing drudgery and maintaining timeliness of farm operations in order to increase productivity. The department also engaged with research and extension activities for effective implementation of much needed farm mechanization in West Bengal and working in collaboration with different departments of Govt. of West Bengal. The academic activities include offering core courses related to farm power sources and farm implements to B. Tech., M. Tech. and Ph.D. programmes. The department also offers basic engineering courses like workshop practices, engineering mechanics, computer aided design and manufacturing and renewable energy sources. The department also caters courses to the UG students of the Faculty of Agriculture and Horticulture. The department is actively engaged in planning and implementing small and medium sized tools, implements and machinery for small and marginal farmers of West Bengal. The department is engaged to popularize appropriate implements for different farm operations starting from tillage to threshing. The department also envisages providing solution for research and extension activities towards effective implementation of custom hiring centre across West Bengal. The department is also looking forward to identify the priority areas in farm mechanization in collaboration with major stakeholders.

Farm Power Laboratory

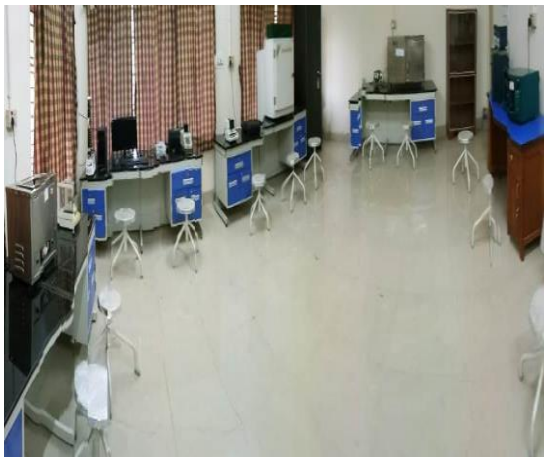
Farm Machinery Laboratory

Department: Food Engineering

The degree programme of M. Tech. (Food Engineering) was started in the year 2011 under Department of Food Engineering of the Faculty of Agricultural Engineering, BCKV, Mohanpur, West Bengal and continued up to the year 2021. Since the year 2022, this Department is offering M.Tech (Processing and Food Engineering) jointly with Department of Post Harvest Engineering. Food Engineering covers wide range of areas like Thermodynamics, Transport Phenomena, Refrigeration and Cold Storage, Dairy and Food Processing, Food Plant Equipment Design, Food packaging Technology, Computational Fluid Dynamics in Food Engineering, Bio-process Engineering, Dairy and Food Product

Technology etc. The Department is engaged in teaching, research and extension activities to create skilled human resources for rapidly growing food processing sector. The main mission of the Department is

- To provide knowledge and skills for better preservation, processing and value addition to agro-products, with the aim of supporting the producers.
- To promote research and development for product and process and assurance of high level of hygiene and safety of processed food.
- To promote food safety laws and regulations for supporting a competitive, modern and safe food market for the consumers.



Food Engineering Laboratory

Refrigeration Unit

Achievements

- No. of M.Tech students awarded = 8
- Prof M K Chourasia delivered an invited talk in 28th Indian Convention of Food Scientists and Technologists organized by AFST (I)
- Prof. M K Chourasia attended "Cold Chain Logistics-cum-training Assessment Meet" as a resource person at NIFTEM, Kundli, Haryana

Department: Post Harvest Engineering

The department is concerned with the technologies and engineering aspects of processing and preservation of agricultural produce. The department undertakes the courses related to processing of agricultural products, related machines and technologies and storage and management of produce. The department also caters the courses of electrical, electronics and instrumentation engineering. Degree of M.Tech. and Ph.D. in Post Harvest Engineering and their courses are offered by the department apart from catering the courses of undergraduate (B.Tech.) level. This department takes the active role to prepare the students to be equipped with the modern technologies of processing and storage of agricultural produce. In the field of research, the department is striving continuously to develop technologies and equipments

for value addition of agricultural products. Under extension, it aims to develop trained manpower and wide awareness on technologies and equipment for value addition.

Electrical & Instrumentation Laboratory

Modern Rice Mill

Achievements

- No. of M.Tech students awarded = 10

Department: Soil and Water Engineering

This department has been established in the year 1996. Since its inception this department is engaged in teaching, research and extension activities. Soil and Water Engineering covers wide areas like Hydrology, Fluid mechanics, Soil Mechanics, Soil and Water Conservation, Irrigation and Drainage, Remote Sensing and GIS, Building Construction and Estimation, Surveying etc. This department provides expertise support to State Govt. departments *viz.*, water resource investigation and development department (WRIDD) and West Bengal Agro-Industries Corporation, Department of Horticulture.

Soil & Water Engineering Laboratory

Drip Fertigation System

Directorate of Research

AINP on Agricultural Acarology

Since 1988, the BCKV has operated the AINP on Agricultural Acarology, which was tasked with documenting mite problems in horticultural crops, maintaining, producing, and using predatory mites, gaining proficiency in the taxonomic identification of tarsonemid mites, investigating mite natural enemies, and standardizing the mass production of prey and predatory mites. Salient achievements are described below.

- Studies on the population dynamics of rice spinki mite, yellow mite of chilli, garlic mite, and red spider mite of okra have revealed a strong correlation between the mite population's occurrence and the host phenology as well as the current meteorological conditions.
- The predatory mite in rice, *Neoseiulus imbricatus* was found to be the most predominant species. Three new species of eriophyoid mites have been identified and described: *Neorhynacus bidhanae* n. sp. (Diptilomiopidae) from *Croton caudatus*; *Dichopelmus puncti* n. sp. (Eriophyidae) from cogan grass, *Imperata cylindrica*; and *Calacarus kalyaniensis* n. sp. (Eriophyidae) from Siam weed, *Chromolaena odorata*.
- Some tolerant lines, BCKV-9, BCKV-2, BCKV-4 and BCKV-6 against spinki mite in rice; Bidhan Chilli-4 and Suryamukhi against yellow mite in chilli; Katki and Gangajali against garlic mite were identified.
- The project has conducted many training programmes for the ST farmers under Tribal Sub-Plan (TSP) and distributed sprayers and other critical inputs among the farmers.

Garlic mite and rice mite infested field

Distribution of sprayer to the farmers

AICRP on Agroforestry

Since 1983, the project has operated in this University at RRS, Jhargram. The basic objectives include determining plant species which are compatible with agroforestry systems, optimizing the combination of tree crops, improving the performance of the most common agroforestry systems in the area, and modifying current technologies to increase sustainability

and productivity. Significant achievements are described below.

- Developed agroforestry models on Gmelina-ber, *Neolamarckia cadamba*-mango, *Dysoxylum binectariferum*-mango, cashew-based, Gmelina-mango, and *Dysoxylum binectariferum*-sweet orange.
- Established Gmelina-mango-pigeon pea models and boundary plantations with Gmelina and lamboo.
- Promoted agroforestry models in different parts of Red and Laterite belts of West Bengal and supported 269 people from 52 families.
- Maintained 20 hectares of demonstration plots with 11 silvi-species and 9 fruit-based agroforestry models.
- Conducted many capacity-building programs on agroforestry system for Scheduled Caste and Tribal farmers under TSP and SCSP programme.

Agroforestry models developed by AICRP on Agroforestry

AICRP on Agro-meteorology

In 1984–85, the AICRP on Agro-meteorology was established. Assessing the impact of weather on pest and disease infestation of field crops, establishing crop weather relationships for the state's major rainfed and irrigated crops in various agro-climatic regions, evaluating crop production potentials in various agro-climatic regions, and evaluating crop microclimate management options to increase crop productivity and water use efficiency are the major mandates of the project. The major outcome of the project is described below.

- Rainfall in 2022 was 44% less than usual, according to the Agro-climatic Analysis, which had a major effect on crop productivity and soil moisture. The temporal and spatial variation of major meteorological parameters, mainly temperature and rainfall, were worked out.
- In case of crop weather relationship, a major breakthrough was the development of a green gram yield prediction model using machine learning process was carried out. Response surface methodology (RSM), which demonstrated an impressive adjusted R^2 of 0.98 in calibration and 0.88 in validation, making it a reliable tool for predicting crop performance based on temperature and rainfall variations. Another key accomplishment was the radiation use efficiency (RUE) analysis for different green gram varieties, where PM-05 recorded the highest efficiency (1.36 g/MJ), followed by

Meha (1.25 g/MJ) and Samrat (1.178 g/MJ), indicating optimal energy utilization for biomass production.

- In rice cultivation, transplanting date experiments revealed that July 1st transplantation yielded higher productivity than later dates, providing valuable insights into optimizing sowing schedules.
- The rice stem borer modelling study identified that minimum temperature above 17°C and relative humidity between 92 to 97% in the morning favour outbreaks, offering crucial information for integrated pest management.
- Additionally, the climate-resilient farming initiative was done under the SCSP program which successfully engaged local farmers through awareness programs, distribution of essential farming tools, and seed support. It ensures the enhanced agricultural productivity in adverse conditions.
- The weather forecast based advisory bulletins, which are prepared mainly for six districts in West Bengal under New Alluvial Zone of West Bengal, used to assist farmers in scheduling irrigation, sowing, and pest management based on real-time weather forecasts. These bulletins are regularly updated in the CROP WEATHER OUTLOOK website.

Field view and Input distribution by AICRP on Agrometeorology

AICRP on Chickpea

The AICRP on Chickpea started activities at this institution in 2015 with the objectives of collecting, evaluating, and conserving germplasm, creating and validating technologies (crop improvement, production), and sharing such technologies through Front Line Demonstrations. The salient findings are described below.

- After three years of research on how tillage techniques affect crop establishment and chickpea yield in rice fallow, it was suggested that broadcasting seed in standing rice 15 days before to harvesting was a good approach.
- The chickpea yield in the inorganic plot was 1400 kg/ha, whereas the mean yield in the organic plot was 1500 kg/ha. Chickpeas in 100% FYM + foliar (Biophos + Biozinc) treatment yielded the highest net return (Rs. 47300 /ha), while 100% RDF + Foliar (DAP + ZnSO4) treatment yielded Rs. 38525 /ha in inorganic plots. In the organic plot, the maximum BCR was 2.46, but in the organic plot, it was 2.15.

Front line demonstrations conducted by AICRP on Chickpea

AICRP on Cashew

The AICRP on cashew was initiated in 1984. The project's objectives include collecting, selecting, conserving, and hybridizing germplasm; evaluating cultivars across many locations under various management techniques; and researching the effects of various biotic and abiotic factors on pest prevalence. The key findings are described below.

- Collected 3 new germplasm with bold nut, big apple and high shelling % type cashew from Paschim Medinipur district of West Bengal. Identified three pre-breeding lines from the F_1 progenies. Identified two promising jambo nut, big apple germplasm from the evaluation of 18 germplasm for the red and laterite zone of West Bengal.
- As part of the effort to supply farmers with high-quality planting materials, a nearly 15-hectare cashew plantation and quality nursery blocks have been built.
- Developed and identified a new variety **Bidhan Bonsai Kaju** (Highly pruning responsive, suitable for high density and ultra-high density plantation (UHDP), cluster bearing, average of 21 nuts/panicle, high shelling percentage (33.6 %), short internode length, high yielding variety [14.6 kg/plant (Normal density)] and 2.5 tonnes /ha (UHDP) and less susceptible to diseases, and recommended for Red and Laterite zone of West Bengal in Annual Group Meet on AICRP on Cashew in 2022.
- Under the TSP program, the project organized several training programmes to promote cashew cultivation, cashew nut plant protection, and small-scale cashew apple and cashew nut processing for tribal farmers. Under the SCSP program, the project established 4.0 hectares of cashew plantations in the districts of Paschim Medinipur and Jhargram.

Training programme conducted by AICRP on Cashew

AICRP on Fruits

In 2014, the project got underway at this University. This project was integrated with Tropical and Sub-tropical fruits with the objectives of collecting, characterizing, and conserving germplasm in-situ, evaluating and selecting cultivars, standardization of root stocks, developing suitable agro-techniques, and developing plant protection modules for 6 mandate crops (Mango, banana, litchi, jackfruit, guava and papaya).

- Constructed a well-equipped laboratory and developed a well-fenced nursery block on the experimental ground to produce and distribute 12,000 high-quality planting materials of various fruit crops on a wide scale.
- Developed a low cost, farmer's friendly vermi-compost unit and a small water body to be used as water source for live saving irrigation during the dry months.
- Conducted numerous FLDs, gave vital inputs to farmers, and organized numerous training programs for SC and ST farmers on fruit crop production, protection, and value addition. Farmers received regular consulting services via mobile devices, WhatsApp, and other platforms.

Field laboratory and training programmes conducted by AICRP on Fruits

Distribution of planting materials and imparted training to input dealers

AICRP on Floriculture

In 1977, the AICRP on Floriculture was established. The project's main goals are to maintain and evaluate genetic resources, breed new varieties, standardize agrotechnological practices, plant protection measures, and develop post-harvest technologies that add value.

- The project maintained around 300 genotypes of chrysanthemum in different categories; 11 tropical orchids; 10 double and 22 single tuberose; 13 African and 05 French marigold; 107 genotypes of *Dahlia* and 32 genotypes of *Hibiscus*.
- The project has developed some promising breeding lines in marigold (BM-4 and BM-5), tuberose (BRH-17, BRH-18 and BRH-19) and Chrysanthemum (Bidhan Manasi and Bidhan Chitra) which are being tested at national level.

- The centre has developed and released two tuberose varieties, **Bidhan Snigdha and Bidhan Ujjawal**
- Among the tested genotypes in different crops, DFR Glad-1, DFR Glad-2, and Pratap Glad -3 of gladiolus; White Star, Yellow Star, Gulmohar and BC-14 in the cut flower category of chrysanthemum; Nanaco, Maghi, Pooja and DFR C-2 in the cut spray category of chrysanthemum; Bidhan Mallika and Bidhan Bishnupriya in the loose flower category of chrysanthemum; White Anemone, Bidhan Manasi, Bidhan Chitra and DFR C-4 of pot chrysanthemum; Bidhan Star (BRH-17) and Bidhan Pearl (BRH-18) and BRH-19 of double tuberose hybrids; Bidhan Kali Gainda-1 of French marigold were found promising.
- The centre has recommended protocols including the combination of recommended NPK doses of fertilizers along with biostimulants and micronutrient combinations for better cut flower production of chrysanthemum (var. White Gem), loose flower production of tuberose (var. Prajwal), cut flower production of gladiolus (var. American Beauty), cut flower production of chrysanthemum (var. White Gem), loose flower production of marigold (var. Bidhan Gold) and cut flower production in China aster (local cultivar).
- The centre has developed protocols for extending the vase life of lotus flowers, and leaves of Cycas, Dracaena and Areca palm. Protocols have also been developed for preparation of Incense sticks and *Gulal.*
- The centre has conducted many training programmes for the farmers, input dealers and KPS.

Release of two tuber rose varieties, Bidhan Snigdha and Bidhan Ujjwal

Field view chrysanthemum and training programme

AICRP on Forage Crops and Utilization

Since 1971–1972, BCKV has been performing the AICRP on Forage crops. Identifying and characterizing underutilized or unexplored plant species; evaluating, maintaining, and improving forage germplasm; producing rice bean and coix nucleus and breeder seeds; and creating a location-specific package of practices are all included in the project's mandate.

- The project has created a "Golden Jubilee Forage Garden" that is 800 m² in size and a rice bean germplasm block that is 2000 m² in size and has 250 genotypes at Central Research Farm, Gayeshpur, Nadia.
- A promising forage lathyrus entry KL-5 has been identified and recommended for release in the states of Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Jharkhand, Bihar, West Bengal and Assam.
- The project has developed protocols involving recommended dose of fertilizers in addition to either Nano urea or Panchagavya for productivity enhancement of dual purpose and fodder oats and lathyrus, respectively.
- The project has organized many capacity development programmes and distributed planting materials of improved varieties and other critical inputs among tribal farmers under TSP programme.

Lathyrus variety, KL-5

AICRP on Groundnut

In 1994, the project got underway at RRS, Jhargram. Evaluation, identification, and hybridization of situation-specific short-duration cultivars and breeding lines that demonstrate exceptional yields, development of new agricultural production technologies and endurance to biotic and abiotic stresses are all part of the project's objective. The key achievements are summarized below.

- The project has identified many Spanish and Virginia type groundnut suitable for growing under West Bengal condition.

- The centre has also developed protocols on efficient use of seed inoculants of phosphorus build up strains, foliar nutrition, irrigation water and weed management for enhancing productivity of groundnut.
- Conducted of 45 numbers of Front Line Demonstrations (FLD) on groundnut cultivation; trained more than 150 farmers under Tribal Sub Plan (TSP) and Scheduled Caste Sub Plan (SCSP) programmes.

Seed Production and Farmers' Training programme of AICRP on Groundnut

AICRP on Honeybees and Pollinators

The project began at BCKV in 2015 with the aim of protecting pollinators and using them sustainably to promote coordinated action across the country. The key observations are summarized below.

- Methods for using palynological investigations to analyze bee foraging have been standardized. In West Bengal, the quantity and distribution of many honeybee species have been charted.
- Observed 'World Honeybee Day', 'Beekeeping and Pollinator Awareness Day', and training for women in self-help groups on *Apis mellifera* queen grafting and managing the dearth season.

Training for the bee-keepers organized by AICRP on Honeybees and Pollinators

AICRP on Integrated Farming Systems

In 1968, the All India Coordinated Agronomic Research Project officially began operations as the AICRP on Integrated Farming Systems. In 2009–10, it was renamed the AICRP on Integrated Cropping Systems. The main centre of the AICRP-IFS Project has been

functioning at Kalyani at Central Research Farm, Gayeshpur since 1990. The project's on-station and on-farm components are currently operating in New Alluvial Zone, and Bankura-1 and Chhatna Blocks of Bankura district of West Bengal, respectively. The IFS model has been established to identify ecologically and economically viable enterprises under climate change scenario; to undertake resource budgeting in systems perspective with special reference to soil, water, nutrients and energy; to evaluate low carbon production modules in the system and to identify and evaluate secondary agriculture avenues in farming systems perspective for attracting rural youth. The key findings are summarized below.

- The IFS model has been designed for 0.66 ha land holding to support a family of small and marginal farmer having six (6) members. The model encompasses components like crop (0.4055 ha), horticulture (0.1125 ha), dairy, vermin-composting, biogas unit (0.052 ha) andfishery (0.09 ha) (fig. 1). Low lying area measuring 0.2 ha of the total crop area of 0.4055 ha has been converted into five pairs of raised and sunken beds alternately, each bed measuring 200 m^2 for paddy cum fish cultivation in the sunken beds and for cultivation of vegetables and arable field crops in the raised beds. Slope in the junction of raised and sunken beds has been utilized for fodder cultivation (hybrid napier). Some vegetable creepers (dolichos bean, bottle gourd etc.) were also grown above the sunken beds on netted scaffolds.
- The synthesized IFS model has recorded net return of Rs. 48,935/- annually and generates employment of 328 man days and 88 kg N, 44 kg P_2O_5 and 41 kg K_2O/year through recycling and vermin-composting; crop component recorded highest gross return (49%), while livestockunit registered highest net return (50%) from the model; inputs purchased from outside and inputs recycled within the system were 37.42%and 25.91%, respectively; while farm labour engaged accounted for 36.67% out of total cost of production; the biogas unit of 2 cubic meter capacity generated biogas equivalent to 115 kg LPG (8 domestic gas cylinders)
- Rice-Potato-Jute system was found to be better on the basis of yield and economics (B:C ratio 1.64) as compared to traditional rice-rice system; Dhaincha/Rice- French bean-Cowpea system was found to be better for maintaining soil health as well as for realizing higher yield and economic benefit (B:C ratio 2.47; Rice (bio-fortified)-Mustard-Green gram was comparatively better (B:C ration 2.44) in respect of family nutrition; Elephant foot yam- Brinjal + Coriander leaf system proved to be better system in respect of generating higher yield (REY 49047 kg/ha) and economic return (B:C ratio 3.42).
- Combination of NPKZn treatment recorded significantly higher rice yield in both the *kharif* and *rabi* seasons along with highest system grain yield, system cost of cultivation, system gross return, system net return and system B:C ratio in on-farm trials.

- Organized many capacity building programmes for SC farmers under SCSP programme and provided them with essential inputs based on their needs in order to increase farm output and revenue.

Different units of IFS model

AICRP on Irrigation Water Management

In 1982, the project began operations at BCKV. Important observations are summarized below.

- Important recommendations include cultivation of sweet corn under black polythene mulch with furrow irrigation method is recommended for higher yield, water use efficiency and profit; Growing of wheat -green gram crop sequence with IW/CPE =1.0 along with application of 10 kg $ZnSO_4$ resulted in higher crop productivity and economic return in New Alluvial Zone of West Bengal.
- Imparted many capacity building programmes for the farmers.

AINP on Jute and Allied Fibres

The project began operations at BCKV in 1974 with the goals of performing varietal evaluation trials, maintaining, characterizing, and screening germplasm to increase fibre yield through breeding efforts, standardizing INM, IWM, and drought management procedures, and conducting adaptation research. The key achievements are summarized below.

- In a series of evaluation trials, 4 lines under white jute and 3 lines under tossa jute were identified very promising.
- Some premature flowering breeding lines were also identified from the segregating generations. Some new entries (BCCO-17, BCCC-14 and BCCO-20) have given under national testing. The notified variety, BCCC-1 was registered under PPV & FRA, GOI.

- Standardized protocols for integrated weed management (hand weeding at 15-20 DAE and 35-40 DAE and Mulching with rice straw @7.5T at 15-21 DAS) for increased yield in jute. Intercropping jute with red amaranthus followed by using Nail weeder and scrapper was found promising.
- Conducted 11 outreach programmes involving 87 farmers covering altogether of 16.3 ha area in Nadia and North 24Pgs. Five capacity building programmes for the farmers were organized.

Demonstration plot at farmers' field of AINP on Jute and Allied Fibres

AICRP on Maize

Since 2015, BCKV has run the AICRP on Maize with the goals of performing varietal evaluation trials, to increase maize yield through breeding efforts, screening of germplasm against biotic stresses, standardizing INM and IWM, and conducting adaptation research. The key observations are summarized below.

- Identified corn varieties (Baby corn -3; Pop corn - 3; Sweet corn -4; QPM - 1 and Normal maize – 11) suitable for West Bengal; Identification of resistant entries for successful breeding program against TLB and MLB.
- Developed protols for site specific nutrient management and weed management; yield loss against MLB of maize has been assessed and IDM module has been developed.
- Conducted FLDs under the SCSP and TSP programs, coordinated several farmer training programs, and provided essential inputs to SC and tribal farmers.

AICRP on Medicinal and Aromatic Crops and Betel vine

In 1984, the AICRP on betel vine began operations at BCKV. Later, in the XIth plan, AINP on Betel vine and AINP on Medicinal and Aromatic Plants were merged. The project's objectives include colleting, maintaining, assessing, and cataloging germplasm; assessing the

state of pests and diseases; developing IPM modules; and creating commercially viable agricultural practices. The salient findings are summarized below.

- The project has maintained large number of OP germplasm (Bangla type -38 nos., Sanchi type-4 nos., Kapoori type-11 nos., and Meetha type- 1no.) and 20 hybrid lines of betel vine.
- A new archaeococcoid species *Perissopneumon kalyaniense* Das & Das (Hemiptera: Coccomorpha: Monophlebidae), attacking *Glycosmis pentaphylla* (Retz.) DC has been discovered from Kalyani, West Bengal.
- Conducted capacity building programme for more than 100 farmers on betel vine cultivation.

AICRP on Micro- and Secondary-Nutrients and Pollutant Elements in Soils and Plants (Voluntary centre)

This voluntary centre has been established at BCKV and a well-equipped laboratory has been set up in the main campus of BCKV, Mohanpur.

- The centre has assessed the suitability of different extractants for determining available boron in soils of 21 locations across three major agro-climatic zones (Red & Laterite, Terai, and New Alluvial) of West Bengal.
- The centre has assessed the suitability of extractants for determination of available Zn in rice growing soils from 30 locations across eight districts of West Bengal.
- The centre has done refinement of critical limits in different micronutrients such as a) S in groundnut, b) Zn in rice, c) B in wheat, d) Zn in potato.
- Farmers sensitization programme on “Biofortification, nutrient grooming and crop diversification” was organized with 50 farmers under “Kishan Bhagidari, Prathamikata Hamarai” campaign.

Laboratory developed by AICRP on Micro- and Secondary-Nutrients

AICRP on Nematodes in Agriculture

The project has been started functioning at BCKV since 1988. The key achievements are summarized below.

- Upon visiting numerous horticultural nurseries, it was observed that a 0–50% infection of root knot nematodes was primarily present in guava and pomegranate seedlings.
- The Project has standardized nursery bed treatments with Biofor pf-2 @ 20 g/m^2 against *nematode* populations in soil; soil application (at sowing) of fluensulfone 2% GR @ 1 kg a.i/ha in rice, application of *Bacillus subtilis* @ 2.5 kg along with 2.5 tons of FYM/ha in brinjal recorded significantly lowest root knot index; Application of Fluopyram 400 SC @ 1000 g a.i./ha in basin area of guava crop was found effective againstthe root knot nematode; Nursery bed treatment with *Pseudomonas fluorescens* @ 20 g /m^2 ($2x10^8$cfu/g) was effective against root knot nematode in rice.
- Organized Nematode Awareness Day on 7th July, 2022; imparted training to the farmers, Input dealers, and SMS of the KVKs.

AINP on Onion and Garlic (Voluntary Centre)

In 2008, this volunteer centre was established at BCKV.

- A few potential accessions were determined to be appropriate: RVC20-22, RVB 20-13 of rabi onions, and RVB-20-01, RVC-20-48 of kharif onions. In the Gangetic plains West Bengal, garlic accessions GN20-11 and GN 20-48 were determined to be appropriate.
- Conducted training courses on onion and garlic production and protection for the farmers in various districts of West Bengal.

AICRP on MULLARP (Mungbean, Urdbean, Lentil, Lathyrus, Rajmash and Pea)

The AICRP on MULLaRP has been operated at BCKV since 2015. Key findings are summarized below.

- Maintained 230 germplasm and breeding lines of mungbean; 114 germplasm and breeding lines of urdbean; 1200 germplasm and breeding lines of lentil and 277 accessions and breeding lines of lathyrus.
- The centre has submitted 07 mungbean entries, 04 urdbean entries, 04 lentil entries and 02 grasspea entries for national evaluation trial.
- Two mungbean entries (BCM-18-1 and MHBC-20-8) have been promoted to AVT-I stage under NEPZ for kharif season and under CZ for summer season; Urdbean entry PBU-18-1 has been promoted to AVT-I under NEPZ for kharif season

and Lentil entry, BLS-1707-09 has NHZ. The promising entries performed well in two years MLT and to be released in West Bengal through SVRC.

- One each of Field pea line IPF 2014-16 (INGR22043) showing durable resistance against rust caused by *Uromyces* spp. and wild bean line (*Vigna stipulacea*) IC553521 (INGR22080) having higher protein content (24.6%) has been recommended for registration by Plant Germplasm Registration Committee of ICAR as genetic stock.
- Standardized protocols for effective weed management in summer urdbean; agronomic biofortification of Zn and Fe through foliar spray in lentil and fieldpea; many IPM modules (Seed treatment with carbendazim + Thiamethoxam + *Rhizobium*, growing millet crop in one row around the field as barrier crop, installation of yellow sticky trap, and pheromone trap, spraying of neem based insecticides at 30 DAS and need based application of insecticides in rotation at 10 day intervals with flonicamid and chlorantarniliprole in sequential manner) for effective management of sucking pests on mungbean/ urdbean, pod borer complex on mungbean and Urdbean; Seed treatment with Imidacloprid 600 FS followed by foliar application of Chlorantraniliprole was found effective against pod borer and seed treatment with Imidacloprid followed by foliar application of pyriproxyfen found effective against sucking insect pests on summer/ spring/ rice fallow mungbean/ urdbean; biorational treatment comprising dusting with ashes of crop residues and fine sand @ (25 +5 kg/ha) was found effective in reducing the aphid population in Lathyrus.

Front Line demonstration and Training programmes organized by AICRP on MULLARP

AINP on Pesticide Residues

The project became operational at BCKV in 1984 with mandate of ensuring food safety and security by conducting comprehensive research on pesticide residues in food commodities, soil, and water was achieved through the fulfilment of the integrated core objectives (Monitoring and Risk Assessment, Method Development and Validation, Good Agricultural Practices (GAP) Promotion, Knowledge Dissemination and Policy Support, and Capacity Building). The key achievements are summarized below.

- The project has established a very well equipped NABL accredited laboratory.
- The centre evaluated residues and persistence (dissipation) study of Fluopyram, Fluopyram Benzamide and Tebuconazole in banana whole fruit, banana pulp (edible portion) and soil after application of luna experience (Fluopyram 200 G/L + Tebuconazole 200 G/L SC) on banana plant as foliar application. The centre also evaluated the residues & persistence (dissipation) study of tetraniliprole and its metabolites in tomato and soil after application of Tetraniliprole (BCS CL73507) 200 g/L SC on tomato plants as foliar spray. The pesticide residue data so generated by this centre has been utilized for label claims & safe waiting periods on the various pesticide-crop combinations have been approved by CIB&RC for their commercial use in the country and/or fixation of MRLs on various pesticide-commodity combinations by FSSAI.
- Under the central sector scheme on "Monitoring of Pesticide Residues at National Level", the centre collected around 720 samples of vegetable, fruits, spices, curry leaves, red chilli powder, rice, wheat, pulses, fish, tea, and water from retail outlets, APMC markets, organic outlets, farm gate located in different parts of West Bengal and analyzed them for the possible presence of various groups of pesticides.
- One Patent Application (No. 202231032170) entitled "A Microwave-Assisted Improved Process for Extraction of Aleuritic Acid from Lac" has been submitted involving Scientist and Research Scholar of the Department (Inventors: Md. Ali, D. K. Hazra, K.K. Sharma, Mohanasundaram A.).

AICRP on Plantation Crops

The project was started functioning at BCKV in 1982 with mandate of collection, conservation and evaluation of location specific germplasm and hybrids, establishment of mother blocks and production of quality planting materials, demonstration of released coconut varieties, development of coconut based cropping system with spices and other crops. The key findings are summarized below.

- Maintained 30 exotic & indigenous germplasm of coconut; Evaluation of the developed crosses of coconut (5 each of Tall × Tall and Dwarf × Dwarf) was going on.

- Identified suitable variety for tender nut; Standardized agronomic schedules for coconut based cropping system model, and important organic spices (ginger, turmeric, chilli, coriander, black pepper) as coconut based cropping system model.
- Observed 'World Coconut Day' on 2nd September every year and distributed quality plant materials to the farmers.

Training programmes organized by AICRP on Plantation Crops

AICRP on Potato

The AICRP on potato at BCKV has become operational since 1972. The salient achievements are summarized below.

- An age old variety Kufri Jyoti has been replaced by 'Kufri Himalini' in major potato growing belts of West Bengal.
- A forecasting model "INDO BLIGHTCAST" against late blight disease of potato has been developed and successfully validated in various potato growing regions of West Bengal.
- Popularized nutritionally rich varieties like Kufri Neelkanth, Kufri Jamunia, Kufri Manik and Kufri Uday among the farmers.
- The centre has standardized seed plot technique and developed a protocol for potato seed tuber production under open field condition.
- The centre has established protocols for micronutrient management in potato
- Participated in different Krishi mela, Kisan Sangosthi and farmers' training programme organized by KVKs, NGOs, GoWB etc.

Field demonstration and Training programmes conducted by AICRP on Potato

AICRP on Pulse Seed Hub

The project was started functioning at BCKV in 2016 with a view to increase seed production of important pulse crops. The project has developed a godown and processing unit at Teaching Farm, Mondouri, BCKV. The following quantity of seed materials were produced by the project.

Crop	Seed Class	Amount (kg)
Lentil	Breeder-Foundation	2146
	Foundation-Certified	1310
Lathyrus	Breeder-Foundation	1869
	Foundation-Certified	1035
Chickpea	Breeder-Foundation	91
	Foundation-Certified	100
Field pea	Breeder-Foundation	180

Godown and Seed processing unit installed at AICRP on Pulse Seed Hub

AICRP on STCR (Soil Test Crop Response)

The project started functioning at BCKV in 1994. The salient achievements are summarized below.

- Running a dedicated Soil and Water Testing laboratory under AICRP on STCR where farmers and researchers can test their samples for different parameters and avail soil test-based fertilizer recommendation with university fixed rate;
- Running the state-of-the-art referral soil laboratory on soil testing method development plus rapid fertility assessment for farmers, different Govt. agencies, NGO's, FPO's under RIDF, Project.
- The moisture component (volumetric moisture content) was first time introduced in soil test based targeted yield equation refinement and validation process in the Indo-Gangetic *inceptisols* to enhance its predictability using machine learning algorithms by using cabbage as test crop.
- Soil Test Based Target yield equation (STCR equation) was experimented and validated through FLD field trials on Garden pea crop (Var. AP 3).
- STCR based fertilization protocol was developed with Coromandel customized fertilizer for rice and potato in New Alluvial Zones and Red and Lateritic Zones of West Bengal. This customized fertilizer exelled over DAP grade fertilizer+S+Zn in rice and 10-26-26 grade fertilizer+S+Zn+B in potato.
- Green manure along with bio-fertilizer and reduced chemical fertilizer produced maximum yield and NPK uptake in rice resulted from a 25 years long rice-mustard-sesame cropping system in Inceptisols. Bacterial fertilizers and FYM together supports higher residual fertility after kharif rice.
- Evaluated Nix-Pro color sensor and Munsell soil color variables as a potential and innovative options for classifying contrasting soil types and predicting soil Organic Carbon in Eastern India.
- Developed a noble framework (model) for (PXRF + auxiliary soil properties)- based soil sensing based fertilizer recommendation (STCR approach) facilitating site and crop specific fertilizer recommendation options.
- Monthly celebrated and impart training in different soil test-based fertilizer recommendation campaign programme like Jai Kishan Jai Vigyan Week/ village adoption programme/Swachcha Bharat Mission Scheme under Scheduled Caste and Scheduled tribal farmers by in-house and on-farm training under SCSP and TSP programmes in different parts of Chakdah and Haringhata blocks of Nadia.

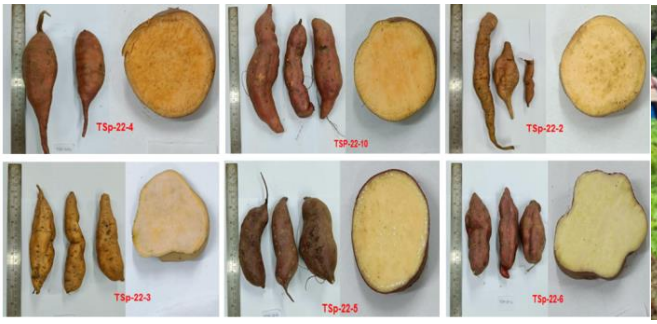
Field demonstration conducted by AICRP on STCR

Training programme conducted by AICRP on STCR

AICRP on Tuber Crops

The project was established at BCKV in 1976. This centre played its part in the collection, conservation and enhancement of tuber crops biodiversity resources, characterization; field evaluation and continuous research on technology development, ensuring new varieties, upgraded package of practices and eco-friendly plant protection measures for the growers. The salient findings are summarized below.

- The centre has upgraded the laboratory facilities and constructed poly green house, and store house with the support provided by the ICAR. The centre has developed facilities for advanced molecular biological and innovative research in basic and fundamental aspects of root and tuber crops.
- The phenotypic and biochemical characterization of 12 upland taro, 8 swamp taro, 6 elephant foot yam and 14 sweet potato germplasm were completed.
- High yielding varieties of different tropical tuber crops have been identified and distributed quality planting materials to the farmers.
- Standardised different methods for preparing value-added products from the tropical tuber crops.
- Conducted many farmers' training programmes on cultivation, crop protection and value addition of tropical tuber crops, particularly to the SC and women farmers.



Promising entries of orange-fleshed sweet potato

Field demonstration of Elephant foot yam

AICRP on Vegetable Crops

The project was started at BCKV in 1975. The key findings are summarized below.

The project has developed well equipped laboratory.

- Collected, characterized and maintained large number of germplasm of different vegetable crops viz., teasle gourd (18 no.), pointed gourd (29 no.), tomato (56 no.), dolichos bean (24 no.), cowpea (18 no.), brinjal (42 no.), chilli (35 no.).
- The project has got 12 accession numbers of germplasm from NBPGR.
- By utilizing genetic resources, the project has identified many trait specific hybrids of different vegetable crops.
- The project has contributed 4 new entries of different vegetable crops for testing at national trials.
- Developed and notified one variety of brinjal '**Bidhan Suphala'** which is moderately resistant to bacterial wilt disease and highly resistant to little leaf disease.
- Recommended two plant protection technologies on integrated management of vector-borne disease in chilli and integrated management of gummy stem blight of bottle gourd disease in at National level.
- Conducted training programmes for the farmers and input dealers to disseminate latest technologies on vegetable production, protection and processing; observed 'Field Days' to acquaint with the latest varieties/hybrids and new IPM technologies for the farmers; more than 400 tribal farmers and 250 SC farmers have been distributed critical inputs including high yielding varieties and hybrids of different vegetable crops.

Field Days and Farmers' training programmes conducted by AICRP on Vegetable Crops

Release of brinjal variety 'Bidhan Suphala' and Standardization of IDM protocols of major diseases by AICRP on Vegetable Crops

AICRP on Weed Management

The project has been underway at BCKV since 2016 with the goals of determining the pattern of weed flora distribution under various cropping systems in the area, the impact of weed flora on the performance and health of different field and horticultural crops, the influence of herbicide molecules on the physicochemical properties of soil, and the creation of appropriate recommendations for weed management in crops and cropping systems.

- Effective weed management strategies in rice-rapeseed-greengram cropping system and rice-capsicum cropping systems have been standardized; weed management protocols of rabi maize, transplanted rice and cabbage has been developed.
- Organized many farmers' training programmes.

Field demonstration and Farmers' training programmes conducted by AICRP on Weed Management

AICRP on Wheat and Barley Improvement

The project started functioning at BCKV in 1972-73. The key achievements are summarized below.

- Evaluated 393 advanced breeding lines; 1860 advanced breeding lines for foliar leaf blight disease and 441 breeding lines through nurseries and utilized 108 lines for breeding programme; developed 21 different combinations F_1 cross combinations of wheat; Evaluated
- Contributed 10 entries in IPPSN and 3 entries namely (BCW 28, BCW 29 and BCW 30) in National Initial Varietal Trials (NIVTs).
- A rapid detached leaf assay for the phenotyping of spot blotch of wheat has been developed.

- Standardized the ideal date of sowing (18th November) in alluvial zone of West Bengal beyond which wheat yield decreases @ 33 kg/ha/day.
- Organized many capacity building programmes for the farmers and conducted FLDs in different wheat growing districts of West Bengal.

Field demonstration and Farmers' training conducted by AICRP on Wheat and Barley improvement

AICRP on Mushroom (Voluntary Centre)

The AICRP on Mushroom was started at BCKV in 2015. The project has developed good laboratory facility for commercial spawn production. Mushroom house was developed and maintained using bamboo logs.

- A total number of 16 specimens of gilled fungi and polypores have been collected, tentatively identified as *Pleurotus ostreatus*, *Termitomyces microcarpus*, *Volvariella volvacea*, *Calocybe indica* and characterized.
- Identified some promising oyster mushroom (*Pleurotus pulmonarius*) varieties (PL-19-102 and PL-19-107) on paddy straw.

Promising oyster mushroom varieties **Training of farmers**

AICRP on Seed (Crops)

The major mandate of the project is quality seed production with supply of paddy seeds to the farmers.

- Developed seed testing laboratory for breeder seed testing after up-gradation.
- Nucleus and Breeder seed production are also sustained to upgrade the seed system predominantly in *Kharif* season.
- Enhanced the Seed Replacement Ratio in paddy.
- Organized many training programmes for SC and ST farmers; organized Field Day and distributed quality seeds to the farmers.

Training programmes conducted by AICRP on Seed (Crops)

AICRP on Spices (Voluntary Centre)

This centre has been started functioning at BCKV since 2009 with mandates to identify the suitable cultivar of different spices, to develop improved technologies and to popularize the spices cultivation in the State.

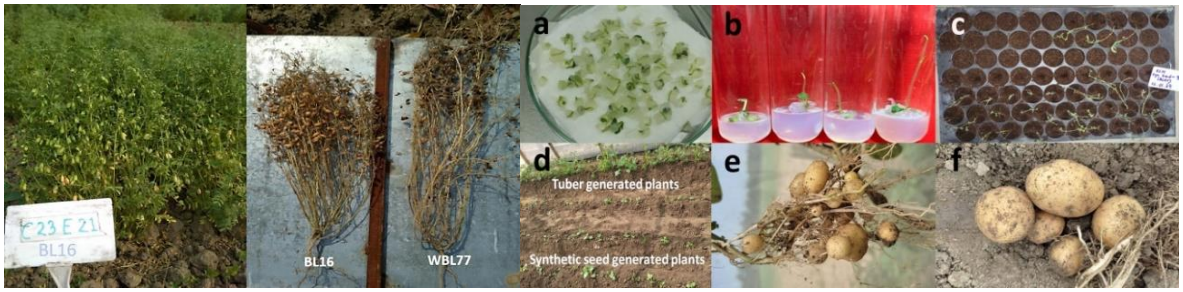
- Identified suitable ginger based intercropping [Ginger + Elephant foot yam (2:2)] systems for higher yield and income.
- Survey and monitoring of diseases and insect pests of seed spices was done at on farm & off farm trials.
- Priming of ginger rhizomes for enhanced germination, vigour and storage rot suppression, and application plant growth promoting rhizobacteria, *Bacillus safensis* for phosphorus solubilization potential was standardized in ginger and turmeric.
- Some promising lines of coriander and feunugreek have been identified.
- Conducted many training programmes for SC farmers.

Field demonstration conducted by AICRP on Spices

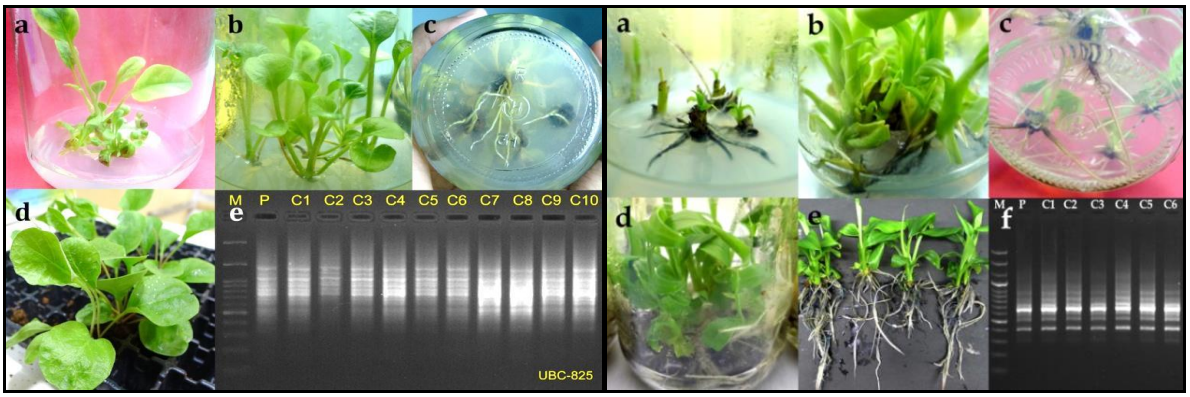
Crop Research Unit

The unit was established at BCKV in 1980 with the aims on collection of diverse germplasm of rice, lentil, medicinal plants, etc., their *in situ* and *in vitro* conservation, and utilisation in breeding programme for the significant benefit of the farmers of this state. The significant achievements are summarized below.

- Released and notified one terminal heat-tolerant lentil variety, **Bidhan Lentil 16** *vide* CVRC Gazette notification on 31.08.2022 with a high harvest index, yield: 1552 kg/ha, and duration: 110-115 days.
- Developed fast-track *in vitro* propagation protocols of local potato genotypes (as per the demand of the Govt. of West Bengal), and several ornamental & medicinal plants.
- Identified several molecular markers that will be useful in improving low light, yield, drought, and terminal heat tolerance of rice and lentil. In addition, alginate-encapsulation-assisted synthetic seed production methods were developed in potato, Sarpagandha, and Brahmi to ensure the storage and exchange of plant materials.
- Facilitates the irradiation facility for researchers across the country.



Variety Development: Bidhan Lentil 16 & Synthetic Seed in potato



Development of fast-track protocols on gerbera and banana mass propagation

Survey, Selection & Mass Production of Nodule Bacteria

The key findings are summarized below.

- Developed carrier sterilization chamber covering 2000 cft area and store room of keeping biofertilizers covering 1500 cft area.

- This unit is regularly producing carrier-based and liquid quality biofertilizers of *Rhizobium, Azotobacter, Azospirillum* and PSB as per indent. A sale proceed amount of Rs. 21,579/- (rupees twenty one thousand five hundred and seventy nine) was generated during this year.
- Season-wise survey, isolation and efficiency testing of native strains of *Rhizobium, Azotobacter, Azospirillum* and P-solubilizing bacteria (PSB), biocontrol agents like *Trichoderma* was done through laboratory and field experiments.
- A highly effective phosphate-solubilizing actinobacterial strain JLGN7 was isolated from red and laterite soils of West Bengal. The strain was identified as *Streptomyces* sp. (NCBI Accession No. ON398996). This strain demonstrated a solubilization capacity of 290.28 mg L^{-1} of P from tri-calcium phosphate in Pikovskaya broth.
- An Experiential Learning Programme (ELP) on 'Biofertilizer Production and Marketing' for undergraduate students was also catered from March, 2022 in this unit.
- Organized many trainings programmes for the farmers, self-help groups, DAESI students etc. mediated by the KVKs, extension wing of the University and the Government for generating awareness on the importance and use of biofertilizers.

Laboratory for mass production of nodule bacteria & Training programme conducted by Survey, Selection & Mass Production of Nodule Bacteria

Comprehensive Scheme for studying Cost of Cultivation of Principal Crops in India

The Cost of Cultivation Scheme was started since birth of our University during 1974. The Scheme was initiated in 1970-71 on the recommendation of a Technical Ccommittee on indices of input cost appointed by Government of India. The mandate of the scheme is to collect real time data from farmers through Cost Accounting method for recommendation of Minimum Support Price (MSP) and other Agricultural Policy. The salient observations are summarized below

- Collected day to day cost data from 600 farmers consisting 60 Block/Tehsils of 6 Agro-climatic zone of West Bengal. This field level data are entered in FARMAP 2.0 online software and scrutiny & checking at Field Supervisor & Field Officer level and finally submitted to Govt. of India for different Agricultural Price Policy and farmer policy.

- The data of selected Crop Complex viz. Paddy, Wheat, Jute, Lentil, Mung bean, Black Gram, Gram, Arhar, Rapeseed & Mustard, Groundnut, Sesamum, Potato, Onion and other crops grown by 600 sample farmers including asset possesses by them along with income from other source (off farm) were submitted to Ministry of Agriculture & Farmers Welfare (GoI) for recommendation of MSP.

Collection of data and field inspection by Additional Economics Adviser and Assistant Economics Adviser, Ministry of Agricultur

Government Sponsored Projects (2022-23)

SL. NO.	Name of the project	Sponsoring Authority	Total cost (in lakh Rs.)	Name of PI
1.	Development & validation of molecular markers for novel alleles of candidate genes enhancing yield & low accumulation of arsenic from native rice germplasm. Niche Area	ICAR GOI	107.09	Dr. Somnath Bhattacharyya,
2.	Creation of Seed Hubs for increasing indigenous production of pulses in India.	(ICAR)	60.00	Dr. Rajib Nath,
3.	FASAL (Forecasting Agricultural Output using Space Agrometeorology and land based Observations.	IMD . (GOI)	117.60	Dr. Asis Mukherjee
4.	NICRA (National Initiative of Climate Resilient Agriculture(for XI plan)	ICAR	-	Dr. Saon Banerjee
5.	Gramin Krishi Mausam Sewa. (Mohanpur)	DST,GOI	14.20	Dr. Lalu Das,
6.	Gramin Krishi Mausam Sewa (Kakdwip)	DST, GOI	-	Dr. A.K.Senapati,
7.	Sustainable Production & Extraction of Lemon grass oil through introduction of mobile oil extraction unit modified as 'Sustainable Processing Extraction & Value addition of Lemon Grass in W.B.	MSME, Khadi & Village industries commission, GOI	14.98	Dr. Anupam Pariari
8.	Value added dry flower production in one step escalation for tribal & marginal women empowerment. WBDST, GOWB	WB DST, GOI	14.29	Dr. Subhendu Sekhar Gantait
9.	Image capturing of pests/diseases in crop/Livestock for purposes of	ICAR, NAHEP	2.00	Dr. Subrata Dutta

	developing Artificial intelligence (AI) based mobile App			
10.	Assesment of sustainability of multi-nutrient extraction for estimating available nutrients in soil under rice	GoWB	6.92	Dr. Sudeshna Mondal
11.	In vitro mutagenesis of Stevia for enhanced production of steviol glycosides	BRNS, Govt.of India	59.85	Dr. Saikat Gantait
12.	Groundwater contamination due to geogenic factors & industrial effluents & its impact on food chain.	ICAR	107.60	Dr. Kallol Bhattacharyya
13.	A study of maximizing growth &survivility of fingerlings production of Indian mazor carps by using better management techniques in seasonal rearing ponds of red & laterite zone of	WB. ATMA. GoWB	59.99	Dr. Anupa Biswas
14.	Exploration of Banana Biodiversity and its Biotechnological Research in Nagaland" under DBT's programme for the	NE. DBT, GOWB	76.00	Dr. Sanjit Debnath
15.	Induction of in vitro polyploidisation & mass propagation of gerbera for improved commercial traits, along with their routine demonstration. DST, GoWB	DST, GoWB	10.50	Dr. Saikat Gantait
16.	Development of protocol with virus free synthetic seeds in potato & their potentiality assessment.	DST, GoWB	15.56	Dr. Sutanu Sarkar
17.	Exploring the possibility of growing millets in red & laterite zone of WB with an emphasis to market linkages	DST, GoWB	6.90	Dr. Golam Moinuddin
18.	Investigations on production and evaluation of biomedicine for controlling of diseases of livestock and health management and protection of crops from diseases and pest	GoWB, Sc& Technology,	28.50	Dr. Mahadev Pramanik
19.	A comprehensive Study to develop cost effective weed management strategy in rice (Oriza sativa) based cropping system for higher productivity at new alluvial Zone of West Bengal	DST, GoWB	12.50	Dr. Smritikana Sarkar
20.	Antioxidant, antimicrobial screening of wild edible mushrooms with additional nutritional attributes and popularization of Pleuroths Ostreatus in tribal villages of district Nadia	DST, GoWB	15.35	Dr. Rishu Sharma

21.	Induced mutation of resistance to spot blotch of wheat caused by Bipolarises sorokiniana (Shoem)	BRNS, GoI	32.77	Dr. Sunita Mahapatra
22.	Use of Fly ash in agriculture for sustainable crop production and environmental protection	NTPC	143.75	Dr. Sidhu Murmu
23.	Breeding for yield, earliness & quality traits in Indian mustard under heat stress condition of red & laterite zone of WB	DST, GoWB	4.91	Dr. Sujaya Dewanji
24.	SmartAgro-Robot Design for Improving Production of Rice Potato based Cropping System through Autonomous Detection of Agricultural situation	DST,GOWB	2.40	Dr. Poly Saha
25.	Consortium Research Project	ICAR	20.00	Dr. Arpita Das
26.	Hyperspectral reflectance& multi nutrient soil health in India	ICAR-NASF	15.92	Dr. Kallol Bhattacharyya
27.	Use of agro textiles as prospective mulching material…Red & laterite zone of WB	GoWB	241.54	Dr. Susanta Kumar De
28.	Study of rice yield under low light intensity using genomic approach under the XII plan scheme Incentivizing Research in Agriculture	ICAR		Dr. Somnath Bhattacharyya
29.	Building LentilGrowing..Climate smart lentil.	ICAR	12.89	Dr. Manabendra Roy
30.	Infrastructure upscaling of Commercial Apiculture Unit of BCKV for Scientific Honey Production & Marketing	Sufal Bangla,	130.94	Dr. Pranab Debnath
31.	Capacity enhancement of Commercial Apiculture Unit of BCKV for Scientific Honey Production & Marketing	Sufal Bangla	72.36	Dr. Pranab Debnath
32.	Up-gradation of Market-linkage Network for Promotion of Aromatic and Special Rice of West Bengal	Sufal Bangla	371.50 228.10	Dr. Mrityunjoy Ghosh
33.	Production, Marketing & Research for quality edible oils, cereals & spices. Setting up of facility centres of Pulse mill (Dal Mill in Krishi Bazars for pulse growing farmers of West Bengal Setting up of facility centres of Rice Mill in Krishi Bazars for rice growing farmers of West Bengal	Sufal Bangla	207.55 271.82 575.87	Dr. Souti Mukherjee
34.	Comprehensive Scheme on Cost of Cultivation	GOI	-	Dr. P.K.Sahu

35.	Development of Advanced virus and other pathogens diagnostics and Testing Service program to the farmers and Entrepreneur for Plant Propagation Materials in West Bengal	RKVY	289.14	Dr. Jayanta Tarafdar
36.	Upgradation of Infrastructure facilities for quality seed production in different farms under BCKV to meet the need of farmers and good research work	RKVY	684.62	Dr. Sudhibrata Mitra
37.	Post Harvest Processing of Marigold and other Flowers for Income Generation of the Farming community in West Bengal	RKVY	144.62	Dr. Suhrrita Chakrabartty Das
38.	Development of a Mechanized Modern Farm for Promotion, Development and Dissemination of Improved Technologies	RKVY	161.16	Dr. Subrata Karmakar
39.	Utilization of Fallow Land Using Mulch (Jute Agro Textiles & Straw) and Unused Seepage Water for Enhancement of Groundnut and Maize Productivity in Red & Lateritic Zone of West Bengal: A Pilot Study	RKVY	69.46	Dr. Susanta Kumar De
40.	Development of a soil, plant and water testing laboratory for sustaining soil health and agricultural productivity in the Red and Laterite Zone of West Bengal	RKVY	226.79	Dr. Susanta Kumar De
41.	Establishment of a state-of-art soil-water testing facility and service centre	RKVY	405.45	Dr. Kallol Bhattacharyya
42.	Empowerment of small and marginal farmers through floricultural technologies and flower waste management	RKVY	145.73	Dr. S.S. Gantait
43.	Fruit based cropping system for promotion food and nutritional security and sustainable livelihood of farming community in Paschimanchal districts of West Bengal	RKVY	125.56	Dr. Mrinmoy Mondal
44.	Establishment of organic resource base for sustainable Agriculture through soil management under soil salinity stressed situation in coastal saline zone.	RKVY	143.31	Dr. Debjani Kundu

Govt. Funded Projects at a glance

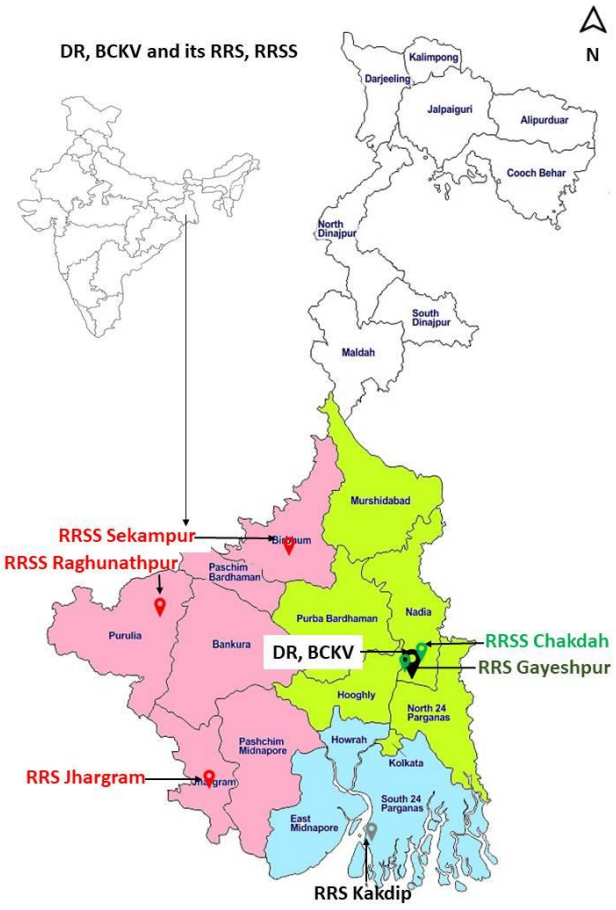
Sl. No.	Sponsoring Authority	Total Project	Total cost (Rs.) in lakh
1	ICAR	9	326.31
2	DST	9	69.54
3	RKVY	10	2395.85
4	Sufal Bangla	4	1630.04
5	GOWB	2	248.46
6	IMD. (GOI)	1	117.6
7	MSME, Khadi & Village Industries Commission, GOI	1	14.98
8	BRNS, Govt.of India	2	92.62
9	WB. ATMA. GoWB	1	59.99
10	NE. DBT, GOWB	1	76.00
11	GoWB, Sc. & Technology	1	28.50
12	NTPC	1	143.75
13	GOI	2	-

International Project 22-23 onwards

Sl. No.	Title	Funding agency	Scientist	Year of start	Duration	Total cost
1	Cropping systems intensifications in the salt-affected coastal zone of Bangladesh & W.B, ACIAR	Australian centre for Int. Agril. Res.(ACIAR)	Dr. Kaushik Brhmachari	18.05.16	5yrs	Rs. 5276704
2	Identification and genetic analysis of lentil mutants for Stemphylium blight resistance with adoptive plasticity	International Atomic Energy Agency	Dr. Somnath Bahttacharya	17.04.20	5yrs	Rs. 737398
3	Circular urban cultivation systems with re-usable textile growing substannces (Circultex) Indo-German	Indo-German Science & Technology Centre,Governme nt of India	Dr. Sanjit Debnath	23.03.21	3yrs	Rs. 7643055
4	Accelerating Genetic gains in Maize & Wheat Livelihoods (AAG) CIMMYT	CIMMYT	Dr. Anirban Maji	13.01.21	3yrs	$ 30,000
5	Wheat Pathology laboratory Upgradation CIMMYT	CIMMYT	Dr. Sunita Mahapatra	29.11.21	3 months & onwards	$ 25,000
6	Genetic improvement of lentil resistance.Rice-fallow.collar rot &lentil blight complex.ICARDA	ICARDA	DR Arpita Das	11.03.20 23	UPTO JUNE 25	$ 20,000
7	Protecting ecosystems and livelihoods of the Sundarbans: Assessing the impact of natural hazards on forest-based ecosystem services	Asia Pacific Network (APN) for Global Changes	Prof. Saon Banerjee	01.11.21	31.10.23	$ 4670

REGIONAL RESEARCH STATION (RRS)

Regional Research Station (New Alluvial Zone), Gayeshpur



The Regional Research Station, New Alluvial Zone, Gayeshpur, Nadia, West Bengal, was established in 1991 at the time of the implementation of the National Agricultural Research Project (NARP) for conducting location-specific need-based research in the New Alluvial Zone of West Bengal stretching from Uttar Dinajpur to North 24-Parganas and covering 8 districts of the State. The significant achievements of research activities of this RRS include release of one Lentil Variety (Bidhan Lentil-16) as Co-Breeder, breeder seed production of Rice, Lentil, Lathyrus, Mustard and Chickpea as per DAC and State Indent for Notified Breeder of BCKV. The RRS also developed some advanced Breeding Lines of Blackgram Greengram and Mustard. Standardization of geo-textiles as soil conditioner to increase productivity on maize-potato-ground nut cropping system under inceptisol and ground nut –Bengal gram - green gram under alfisols soil of West Bengal.

RRS, NAZ have successfully implemented farmers' participatory training-cum-demonstration programme in farmers' fields for production of enriched compost, elephant foot yam seed, green gram, groundnut using jute agro-textiles and participatory training-cum-demonstration activity has also been taken for capacity building and augmenting production of fish (Indian major carps) in the villages of Saguna Gram Panchayat, Nadia.

Demonstration of low-cost compost

Mulching of groundnut

Trial on mustard

Breeding trial on mustard

Regional Research Sub-Station (New Alluvial Zone), Chakdah

The Chakdah Regional Research Sub-Station is located at Uttar Panchpota, Nadia district (22.57^{0}N and 88.32^{0}E)**.** The **c**haracterization and evaluation of pigmented and non-pigmented rice was done by this RRSS to assess genetic variability for agro-morphological, grain quality and biochemical parameters among the landraces of rice. Landrace like Burmablack, Kalobhat, Mamihunger, Manipuri Black, Kalobora from black rice category and Tulaipanji, Ketkijoha, Nuakalazira were promising. Identification of sequence variations among glutinous and non-glutinous cultivars of rice was also don in 2022-23. A study was contemplated to determine the genetic variability for Fe and Zn content among the lentil genotypes followed by unravelling genotype × environment interaction. Preliminary studies with 125 genotypes of lentil detected substantial range of grain Fe (44.46 mg kg^{-1} to 121.64 mg kg^{-1}) and Zn (17.45 mg kg^{-1} to 77.25 mg kg^{-1}) content. BCL-10212 was detected with high grain Fe containing stable line. Screening of lentil genotypes under rice fallow and conventional condition was done. Experiment was carried out with 130 genotypes of lentil at both rice fallow (no- till) and conventional ecology (with till) and detected IC 560183 for “no till” RF ecology and WBL-77, IC 559996, ILL-7978 and L 1112-19 for “with till” ecology as promising lines for achieving sustenance and better nutritional security. Under plant protection section, study on brood emergence of rice yellow stem borer *Scirpophaga incertulas* (Walk.) and their relation with environmental factors was carried out. Life table study of white backed plant hopper *Sogatella furcifera* (Horvath) on rice in West Bengal was also done.

Promising Rice accessions

Screening of Lentil Germplasm

Regional Research Station (Red Lateritic Zone), Jhargram

The Agricultural Research Farm was set up at Kadam Kanan, Jhargram (22.28^0N and 87.05^0E) by the Viswavidyalaya in 1977 to conduct location-specific trials in agriculture and allied sectors. The AICRP on cashew and agro-forestry were implemented in 1982-83 and 1983-84, respectively. To boost regional research in the Red & Laterite Zone of West Bengal, the Regional Research Station, Jhargram was established in 1989-90. Scientists carried out need-based seasonal research and extension activities to improve productivity and farmer livelihoods. In 2022-23, key experiments included studying nitrogen and phosphorus fertilizer use in maize, which identified optimal application for better yield. Trials showed pyraclostrobin 20% WG @ 500g/ha effectively controlled soybean diseases and improved yields. Groundnut germplasm trials revealed TG 51 as the best performer under irrigated conditions. Integrated nutrient management studies in tomato indicated higher NPK uptake with lime, organic, and inorganic fertilizers, suggesting lime and boron application along with Trichoderma boosts yield in acidic soils. Extension work included participatory need assessments in Jhargram villages using group discussions and SWOT analysis to identify and address farmers' challenges. The station also participated in Krishi melas, block-level programs, and mass media outreach. A new cashew variety, "Bidhan Bonsai Kaju," was released in 2022. Additionally, training on agribusiness through post-harvest management of agri-horticultural crops was conducted, with farmers showing enthusiasm in adopting new technologies. RRS scientists remain actively involved in community-oriented programs and media efforts to support regional agricultural development.

Inauguration of DAESI programme at RRS, Jhargram

Awareness programme on health and nutritional benefits of millets

Awarness programme for climate change amongst school students

Exposure visit on use of biofertilizer and application in crop field

Regional Research Sub-Station (Red & Laterite Zone), Raghunathpur

The achievements of the RRSS, Raghunathpur, Purulia (23.55^0 N and 86.67^0E) for the year 2022-23 are as follows:

- Maintenance and evaluation of 31 high yielding rice varieties (Short, Medium and Long) duration in the red and laterite zone of West Bengal.
- Maintenance and evaluation of 13 indigenous aromatic rice cultivars in the red and laterite zone of West Bengal.
- The farm was produced different varieties of paddy seeds as like Dhiren- 21.37 q, Kanak- 11 q kg and Lathyrus-1.62 q. and Fish-3.65 q.
- Revenue was generated of Rs. 122456.00 and the same has been submitted to the University.
- Renovation of 6 bigha pond and nursery pond excavated-13 nos.

Apart from these, a papaya & banana fruit orchard covering an area of 0.25 bigha was established in June 2022. Popular local papaya & banana fruit plants were planted at premises and different infrastructures have been developed and also farm implements were purchased at Regional Research Sub-Station (Red & Laterite Zone), BCKV, Raghunathpur, Purulia, West Bengal.

Soil & seed testing laboratory

Farmer's interaction cum training Hostel

Scientist Quarter

Covered Threshing Floor

Regional Research Sub-Station (Red & Laterite Zone), Sekhampur

The RRSS is located at Gadadharpur, Sekampur (23.48^{0}N and 87.35^{0}E) in Birbhum district. In the year 2022-23, wild ber trees are planted along roadsides, canals, and farm boundaries often produce sour, low-value fruit. The top-working technique offers a solution by grafting superior-quality buds onto these trees using T-budding. This method transforms them into high-yielding, quality fruit producers within a year—much faster than traditional methods. The expansion of Bagda Kanthali Banana Cultivation in Birbhum is another achievement. Farmers in Birbhum traditionally grew low-yielding wild Kanthali bananas. Trials with various cultivars revealed Bagda Kanthali as a superior performer with higher yields and better fruit quality. Impressed by its profitability, farmers began cultivating it in homesteads and around ponds. The success has led to widespread expansion, significantly boosting yield, income, and making banana farming more profitable and sustainable in the region. In Birbhum, farmers are growing dragon fruit around their homes, benefiting from its nutrition and income potential. Its dense, thorny growth acts as a protective hedge, while the plants bear fruit within two years, with a harvest season lasting over five months. Its rising demand and market value are making dragon fruit cultivation popular, boosting farmers' health, income, and agricultural sustainability. The centre introduced polythene mulch for the cultivation of vegetables such as Bhindi, Patal, Chili, Brinjal, Tomato, and Bitter Gourd and pioneered the use of plant metabolites as residue-free solutions for insect management, effectively controlling sucking insects, loopers, mites, rice stem borers, and brown planthoppers (BPH). Five promising native Rhizobacteria are obtained from different regions

of the red and lateritic zone and the Pathology Department of BCKV, were evaluated on various crops to assess their PGPR performance and potential for disease management.

Brinjal with plastic mulching

Tomato with plastic mulching

Covering of cucumber crops with shade cloth

Dragon fruit Orchard

Regional Research Station (Coastal Saline Zone), Kakdwip

The Regional Research Station is situated at Akshyanagar, Kakdwip, South 24 Parganas (21.84^0N and 88.20^0E). This Research Station has issued Agromet Advisory Bulletins related to day-to-day weather forecasting and extreme weather events (like cyclones, heat and cold waves, hailstorm and draught) and mitigation for better crop production are provided to 1000 farmers of South 24 Parganas and Purba Medinipur districts through WhatsApp messages. An amount of 13 kg seeds of Elephant foot yam was produced. During this year the revenue generation was in the tune of Rs. 264534.00 and the same has been submitted to the University. A dragon fruit orchard covering an area of 0.5 bigha was established in May 2022. The most popular dragon fruit cultivars, namely Moroccan and Vietnam dragon with red pulp and other dragon cultivar with white pulp were planted. In case of technology generation and variety development, method demonstration on direct seeded rice cultivation in low land situation was done and production technology for good quality seed of paddy, pulses (green gram, lentil, black gram, lathyrus etc.) and oilseed crops (rapeseed-mustard) for farmers in the locality was established. Elite salt-tolerant germplasm of paddy and foundation seeds of paddy are available at the farms which are being sold. The farm is currently

maintaining almost 65 paddy germplasms which are salt tolerant. Radio Talk in *Akash Bani* on "Ill effects of Stubble Burning" was broadcasted on 14.02.2022. Farmers awareness programme was organised by AMFU, Kakdwip in Mousuni Island, Block Namkhana, South 24 Parganas to aware the farmers about Meghdoot, Damini apps and effect of extreme weather on crop. Another Farmers' Training Programme and Field visit organized under RKVY Cafeteria Project in 2022.

Farmers' awareness programme and seed distribution by RRS, Coastal Saline Zone

East Zone Inter Univ. Cricket (Men)

Sl. No.	Name and Location	Date
1.	Kalinga Institute of Industrial Technology (KIIT), Bhubaneswar starting from	19th February, 2023

Agri Unifest

Name and Location	Name of the Award	Name of the Event	Name of the Students
21st AgriUniFest at Gandhi Krishi Vigana Kendra (GKVK) campus, UASB, Karnataka on 13-17 March 2023	Gold Medal	Light Vocal	Hiya Dutta
		Group Song	Hiya Dutta, Gourabanwita Banerjee, Aloy Adak, Pranab Nirmalya Das, Somnath Panda, Bipasa Adhikari
		On-spot painting	Promita Kharia
	Silver Medal	Cartooning	Soumyadeep Sarkar
	Bronze	Quitz	Sambowdeb burman, Argha Mandal
	Group champion	Music	Participants of BCKV
	Group runner-up	Fine-Arts	Participants of BCKV

Annual Athletic Meet

Sl. No.	Name and Location	Date
1.	XLIV Annual Athletic Meet 2022-23	10.02.2023

Agri-Meet: Football (Men)

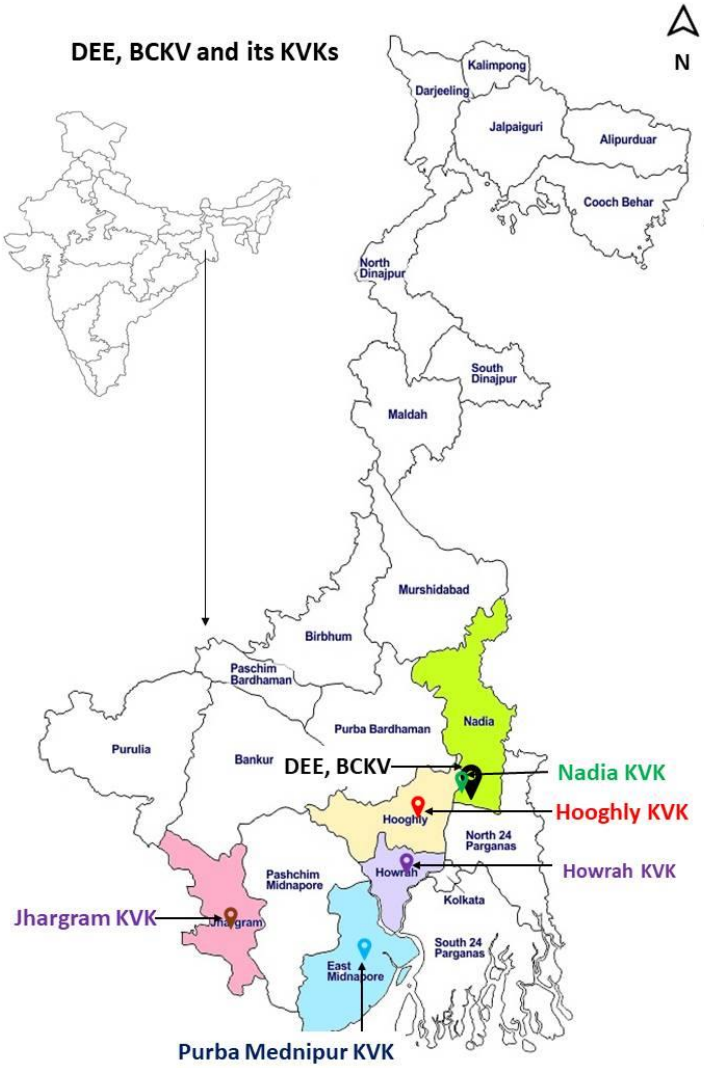
Sl. No.	Name and Location	Date
1.	Agri-Meet: 2022-23 in Football (Men) event at CCS, Haryana Agricltural University, Hisar (Haryana)	20-24 February 2023

Annual Cultural Programme

Sl. No.	Name and Location	Date
1.	Nabarun – 2023 and Annual Cultural Programme : Naihrit-2023	03.01.2023 to 05.01.2023

Directorate of Extension Education

The Directorate of Extension Education performs as the apex facilitating organ to take care of outreaching various clientele groups and other stake-holders across the South Bengal districts of the states through its various delivery units like the Krishi Vigyan Kendras (KVKs), Agricultural Technology Information Centre (ATIC) and the Farmers' Academy Convention of Centre (FACC). At present Viswavidyalaya has five Krishi Vigyan Kendras (KVKs) established in the district of Nadia, Howrah, Hooghly, Purba Medinipur and Jhargram with full fund support from the Indian Council of Agricultural Research (ICAR).



Agricultural Technology Information Centre (ATIC)

Various services extended through ATIC, ranges from offering the benefit of diagnostic services, sale of technological inputs among farmers, supply / sale of farm publications and organizing farmers' visit to various units as per interests of the farmers etc. During 2022 total 4999 visits have recorded at ATIC. Total 2648 numbers books/technical bulletins were sold among 2013 visitors. During 2022 different high quality planting materials were sold among 915 farmers.

Farmers Academy & Convention Centre (FACC)

The Farmers' Academy and Convention Centre (FACC), formerly Lake Hall, has become a hub of agricultural education and extension in Eastern India. Located in Kalyani, West Bengal, it is a preferred venue for seminars, workshops, training programs, symposiums, and various social events, providing a comprehensive space to host diverse programs under one roof. FACC continues to uphold its legacy of excellence in transmission agricultural technology through hosting various training programmes. FACC offers modern amenities, including an AC auditorium with multimedia and internet facilities, alongside AC and non-AC rooms, a 100-seat dining hall, a 450-seat community hall, and AC conference rooms. Revenue Generated by FACC in Financial Year 2022: Rs. 27.23 Lakh (approx.)

Programmes conducted at FACC:

Sl. No.	Name of the Programme	Number
1.	Diploma in Agricultural Extension Services for Input Dealers (DAESI)	2
2.	Symposium/Conference /Workshop	4
3.	Exposure Visit	2
4.	Group Meeting / Review Meeting	4
5.	Training Programme	1
6.	Reunion Programme	14

FACC-BCKV being the best performing Nodal Training Institute of DAESI Programme in West Bengal was awarded with 1st prize for the year 2021-22

Research and Extension system interface Workshop / Capacity Building Programme Organized in 2022.

Sl No.	Title of the Training Programme	Duration	Participant
1	Soil, Plant & Environment Health for sustainable agriculture	March 21-22, 2022	25
2	Recent Development in Agriculture for sustainable farming	November 17-18, 2022	23

Capacity Building Programmes

The Extension Education Directorate has conducted various types of Capacity Building Programmes through the KVKs and Farmer's Training Centre (FACC) during 2022. Among different training programmes majority of the programmes were conducted for the farmers and farm women (63.7%) followed by rural youth (9.4%) and extension personnel (26.9%).

Different category wise participants trained during 2022 through the Extension Directorate:

Clients group	HQ & FACC	Nadia KVK	Hooghly KVK	Howrah KVK	Purba Medinipur KVK	Jhargram KVK	Total
Practicing Farmers	725	2157	4197	1710	4225	1975	**14989**
Rural Youths	-	1385	414	360	52	10	**2221**
Extension Functionaries	80	1783	1327	3040	80	26	**6336**
Total	**805**	**5325**	**5938**	**5110**	**4357**	**2011**	**23,546**

NADIA KRISHI VIGYAN KENDRA (2022)

Nadia, a district of West Bengal is situated in its eastern side with its headquarters in Krishnanagar. Geographically, the district lies at 23°47'N latitude, 88°56'E longitude. The district occupies an area of 3,927 sq km.

During 2022, Nadia KVK, BCKV took up a pivotal role in registration of local germplasms under PPVFRA scheme. There are 13 indigenous varieties (11 paddy and 2 brinjal) registered under PPVFRA.

Participatory Varietal Evaluation of 26 Paddy varieties had been done in collaboration with IRRI. Six varieties were selected by the local farmers suitable for the district.The Clean Food Project funded by IBM lead by Inhana Organic Research Foundation, Kolkata in collaboration with Nadia KVK has been awarded with "Best Innovative CSR Project" by UBS Forum at the 6th Edition, CSR Summit and Awards held on 08th November, 2022 at Bangalore. In addition, the project also awarded as Winner in the category of Environment at the 8th CSR Impact Award by CSRBOX and Dalmia Bharat Foundation on 15th November, 2022 at New Delhi.Nadia KVK successfully completed the preparation of C-DAP for Nadia District with active participation of the district line departments.During 2022

it had conducted 180 training programmes for the 5325 participants of which about 54% from SC/ST community. Nadia KVK conducted 123 number of extension activities with participation of 4,841 beneficiary of which around 37.3% SC/ST community during 2022.

Technological intervention of Nadia KVK through different approaches during 2022

Sl. No.	Activities	Magnitude
1.	Training (including skill training)	180 No./ 5,325 participants
2.	On Farm Trial	8 No./ 61 participants
3.	Front Line Demonstration	81.3 ha/ 577 participants
4.	Other extension activities	123 Nos./ 4,841 participants
5.	Technological input Production at KVK farm	168.5 q
6.	Planting Material Produced	62,850 Nos.
7.	No. of soil health card issued	258 Nos.
8	Media coverage	07 Nos.

HOOGHLY KRISHI VIGYAN KENDRA (2022)

Hooghly KVK situated at its district head quarter Chinsurah (Chuchura). The geography location of the District is Latitude: $22^0$55' N Latitude: $88^0$24' E, under New alluvial zone of Southern Bengal. The district occupies an area of 3,149 sq km. During 2022, Hooghly KVK registered 5 (five) numbers of local germplasms under PPV&FRA scheme. Three farmers got their registration certificate in this year under PPV&FRA scheme.

Participatory Varietal Evaluation of 32 Paddy varieties of different field crops and vegetable crops had been done in collaboration with IRRI. Nine varieties were selected by the local farmers suitable for the district. During this time, Hooghly KVK trained more than 100 rural youths for entrepreneurship development under Attracting and Retaining Youth in Agriculture (ARYA) project and more than 55 youths are sustainably running their enterprises.

Hooghly KVK successfully completed the preparation of C-DAP for Hooghly District

with active participation of the district line departments.

In 2022, 178 training programme were conducted for 5,938 participants, of which approximately 54% belonged to the SC/ST community. Additionally, Hooghly KVK organized 158 extension activities, reaching 47,337 beneficiaries, with about 37.3% from the SC/ST community.

Technological intervention of Hooghly KVK through different approaches during 2022

Sl. No.	Activities	Magnitude
1.	Training (including skill training)	178 No./ 5,938 participants
2.	On Farm Trial	8 No./ 56 participants
3.	Front Line Demonstration	88.2 ha/583 participants
4.	Other extension activities	158 Nos./7,337 participants
5.	Technological input Production at KVK farm	97.5 q
6.	Planting Material Produced	1,16,500 Nos.
7.	No. of soil health card issued	446 Nos.
8	Media coverage	08 Nos.



HOWRAH KRISHI VIGYAN KENDRA (2022)

Howrah Krishi Vigyan Kendra got sanctioned by Indian Council of Agricultural Research (ICAR) in the year 2005 under the administrative control of Bidhan Chandra Krishi Viswavidyalaya (BCKV).This KVK is situated at Jagatballavpur, Howrah under the New Alluvial Agro-climatic zone of West Bengal.

Service provides by Howrah KVK:

i. On-farm testing to assess the location specificity of agricultural technologies under various farming systems.

ii. Frontline demonstrations to establish production potential of technologies on the farmers' fields.

iii. Impart training to practicing farmers, farm women, rural youth, extension functionaries on different aspects of Agronomy, Horticulture, Plant Protection, Soil Science etc.

iv. Advisory services to farmers on different aspects of agriculture and allied sectors using ICT and other media means.

v. Supply of critical inputs tested by our KVK to the practicing farmers as a part of component demonstration programme.

vi. Extrapolation of short-term research for location specific sustainable agriculture to every corner of the district.

vii. Analysis of soil testing with minimal rate.

viii. To work as Knowledge and Resource Centre of agricultural technologies for supporting initiatives of public, private and voluntary sector in improving the agricultural economy of the district.

ix. KVKs produce quality technological products (seed, planting material, bio-agents and livestock) and make it available to the farmers, organize frontline extension activities, identify and document selected farm innovations and converge with ongoing schemes and programs within the mandate of KVK.

x. KVK has developed and maintained different demonstration units at its instructional farm for showcasing modern agricultural technologies to the farmers, rural youth, students of different schools & collages and other line departments.

Technological intervention of Howrah KVK through different approaches during 2022

Sl. No.	Activities	Magnitude
1.	On Farm Trial	6 No.
2.	Front Line Demonstration	14 Nos., 69.97 ha/ 459 participants
3.	Other extension activities *(Field Day, Advisory service, Diagnostic visits, KisanMela, Scientific visit to farmers field etc.)*	493 Nos./5137 participants
4.	Technological input Production at KVK farm	175.4 q
5.	Planting Material Produced	17050 Nos.
6.	Media coverage	14 Nos.

OTHER SALIENT ACTIVITIES/ACHIEVEMENTS OF HOWRAH KVK

i) Collaborative varietal trail in the farmers' field of Howrah district with IRRI, Philippines for identification of suitable varieties for this agro-climatic zone.

ii) The KVK has developed CDAP for Howrah district under RKVY-RAFTAAR for 2021-22 to 2025-26.

iii) During this FY KVK conducted two DAESI programme with 80 nos. of input dealers.

iv) 3 days residential Skill development training for school teachers of Vocational Board of Government of West Bengal in vegetable, plantation, spices and medicinal crops.

v) Live Phone-in programme at Doordarshan Kendra Kolkarta for promotion of agricultural technology.



PURBA MEDINIPUR KRISHI VIGYAN KENDRA (2022)

Purba Medinipur district is mainly a land of agriculture and more than 80% of the total

population is residing in the villages and the rural economy is based on Agriculture and Agro-based small industries. The district Purba Medinipur falls under two agro climatic zones namely, i) Bindhiya 4 alluvium zone covering 6 blocks ii) Coastal saline zone covering 19 blocks. In the year 2022, Purba Medinpur KVK conducted technological intervention on promotion of seed production of Water-Logged Resistant Rice Variety (SS 1) and High-Yielding Rice Variety (Var. Bidhan Suruchi) 25 ha, deep water rice varieties for lowland areas of the district (CR Dhan 409, CR Dhan 507) 5 ha, Pulse and Oilseed crops 23 ha, Fruit fly management of cucurbit crops with Pheromone Trap @ 30 per Acre 4 ha, Management of Rugose Spiralling Whitefly of Coconut with Yellow sticky trap 3/ palm and Spray Neem oil 10,000 ppm @ 1ml/L on Coconut 5 ha, Management of Downy mildew of Rose with Metalaxyl-M 4% + Mancozeb 64% WP @ 2gm/L 5ha, Rearing of Backyard RIR chicks as a part of livelihood development of farm women 300 units, promotion of Low cost vermicompost production Technology 35 units, demonstration of production technology of Groundnut 150 ha, Promotion of Bengal Aromatic Rice var. Radhatilak 100 ha and promotion of Betelvine cultivation adopting improved technology and structure 200 ha.

To develop agor-forestry model for new alluvial tracts of Purba Medinipur, NABARD funded the project "Agro Forestry and Value Chain Management for Doubling Farmers' Income in New Alluvial Region of West Bengal" was run successfully.

The KVK successfully completed the preparation of C-DAP for Purba Medinipur District with active participation of the district line departments.

During 2022 it had conducted 152 training programmes for the 4357 participants of which about 14% from SC/ST community. The KVK conducted 3 number of extension activities with participation of 134 beneficiary of which around 10% SC/ST community during 2022.

Technological intervention of KVKs through different approaches during 2022

Sl. No.	Activities	Magnitude
1.	On Farm Trial	10 No.
2.	Front Line Demonstration	108 ha/ 535 participants
3.	Other extension activities *(Field Day, Advisory service, Diagnostic visits, Kisan Mela, Scientific visit to farmers field etc.)*	859 Nos./ 14,563 participants
4.	Technological input Production at KVK farm	15.84 q
5.	Planting Material Produced	90000 Nos.
6.	No. of soil health card issued	50 Nos.
7.	Media coverage	25 Nos.

JHARGRAM KRISHI VIGYAN KENDRA (2022)

The KVK Jhargram is located at 22.45° N 86.98° EatVill. - Kadamkanan, P.O &Distt.: Jhargram, West Bengal – 721507 under Red & Lateritic Zone of West Bengal. The KVK has been adopted by the University in the year 2021. During 2022 Jhargram KVK had conducted 98 training programmes for the 2011 participants of which about 64% from SC/ST community.

Certificate course Diploma in Agricultural Extension Services for Input Dealers (*DAESI*)

The Extension directorate has been implementing Diploma in Agricultural Extension Services for Input Dealers (DAESI) course in collaboration with SAMETI and MANAGE. 5 units under the directorate are implementing the course as Nodal Training Institute (NTI) viz. FACC, Hooghly KVK, Nadia KVK, Howrah KVK and Purba Medinipur KVK.



Technological intervention of Jhargram KVK through different approaches during 2022

Sl. No.	Activities	Magnitude
1.	On Farm Trial	3No.s
2.	Front Line Demonstration	16 ha/208 participants
3.	Other extension activities *(Field Day, Advisory service, Diagnostic visits, KisanMela, Scientific visit to farmers field etc.)*	280 Nos./2489 participants



The detail of the DAESI courses during last 5 years

Name of the NTI	No of batch completed	Ongoing batch	Total Participants	Resource Generation (In Lakh Rs.)
FACC	6	2	320	64.00
Hooghly KVK	9	2	440	88.00
Nadia KVK	6	2	320	64.00
Howrah KVK	5	2	280	56.00
PurbaMedinipur KVK	2	2	160	32.00
Total	28	10	1520	304.00

DIRECTORATE OF FARMS

Presently there are 13 numbers of farms in different agro-climatic zones under this Directorate having total area about 1257 acre. The farms are running with a vision to support the teaching, research and production of quality seed of different crops having different classes (Breeder, foundation and certified) with newly introduced variety projecting SRR at least 50% within coming 3-4 years.

Production and Revenue

Production of seed in quintals

Year	Paddy	Pulse	Oilseed	Jute	Elephant foot yam	Turmeric	Sapling Production	Revenue (Rs.)
2022-23	3010	130	12	1	50	52	11000	84,00,850

Crop Cultivation at AB Block Farm

Crop Cultivation at Mondouri Farm

Facility development

Farm mechanization plays a vital role in increasing agricultural productivity as well as lessen the cost of cultivation. Mechanization has been well received in India as one of the important elements of modernization of agriculture, enhancing the agricultural productivity and consequently rural prosperity. Quality seed production is a very important task of our institution to cater the seed among the farmers with a view to increase their production and improve their livelihood. Seed grader machine plays a vital role for quality seed production. In this regard, State Govt. has supported us by facilitating 5 (five) nos. of seed grader machine for different farms under RKVY project having one time assistance (OTA) amounting Rs.38.25 lakh.

Grader Machine at Chakdaha Farm

Under RKVY project an amount of Rs.6.84 crore has been sanctioned to develop different infrastructure in different farms like seed godown, threshing floor, irrigational facilities, pucca road etc., with a view to produce more quality seed. All the work will be completed within a few months.

Seed Godown and Threshing Floor at D Block Farm

Seed Godown and Threshing Floor at C Unit Farm

Seed Godown and Threshing Floor at AB Block Farm

Fish is one of the favourite items in the food menu of almost 60% of Indians. Fish is the main item of Bengali dish also. Market demand is always high fish item. If we consider global demand, the total requirement becomes very high. The main source of fish is from sea, but the global fish harvest from the sea is decreasing rapidly. Fish cultivation in sweet water is increasing with a prominent future market. Considering this we have developed another 9 acre of uncultivated low land to water bodies for fish cultivation which in turn will save the bio-diversity as well as will act as reservoir of water for agricultural irrigation purposes.

Low-Land Development at Mondouri Farm

Fruit trees contribute to environment in many ways, providing oxygen, improving air quality. Climate amelioration, conserving water, preserving soil and supporting revenue generation by producing fruits. Thinking of that we have developed about 12 acre of Mango, Mosambi, Jackfruit, Cashewnut, Coconut, Arecanut, Litchi plantation in different farms of BCKV in this year.

Mango and Jackfruit Orchard Development at Farm

To transfer the innovative technology to the farmers we have conducted 5 numbers of hands on training to the farmers in different districts of West Bengal 4 field day and attended 2 Krishi Mela with stall having different farms produce, seed displays, agriculture literatures etc.

Hands on Training at Farm Level

CENTRAL LIBRARY

The Central Library of Bidhan Chandra Krishi Viswavidyalaya holds a unique position by contributing to the academic excellence and research competence in all segments of the university's academic structure. It is housed in a colossal four-storied eye-catching building in the Mohanpur campus. Being in the center of the campus, it is easily accessible from all corners of the university. This building has a carpet area of about 81,000 sq ft.

The library caters services to satisfy the study and information needs of students, faculty members, scientists, research scholars, extension personnel, officers and other staff members of the university. The library also provides consultation facilities to outside scholars, teachers and students of other universities as well as ex-students of this university as per the Library Rules.

Different Sections:

For smooth functioning of the library it is divided into nineteen inter-linked sections:

- Circulation & 'Book Bank'
- Reference & Reading
- Career Corner
- Acquisition & Processing
- Newspaper Zone
- CABI Access Zone
- Internet / e-resources Zone
- Bound Periodicals
- Report Section
- Current Periodicals
- Thesis and Dissertation
- Reprography Units
- Loose Journal Zone
- Old & Rare Books
- Conference Room
- Book Exhibition Arena
- Book Stack Unit
- Binding Section
- Special collection Section

Learning Resources:

Print resources:

The Central library has a rich collection of **80889** + Books, **1191** Journals Titles, 6120 Loose Journals & Periodicals and **25,043** Volumes of Bound Journals, **40** Popular Magazine **6139**

Ph.D. & M. Sc. Thesis, more than **4360** Reports, 826 Non-Book Materials and many other reference materials

Electronic resources:

The library is further enriched by its own subscription of e-books & databases and the vast collection of CeRA initiative of ICAR.

Most of the agriculture related e-journals and highly demanded e-books from selected publishers are available in CeRA. Users access these online resources through remote login ID and password. Using this online platform library patrons place demand to the other libraries under CeRA umbrella for journal articles. Through the 'Admin' link, the Librarian of concerned institution can access this module by providing the unique Username and Password to fulfill the requests received from other Institutes/Universities. This library also extends the same service to other institutions.

Facilities & Services:

Utilizing its vast collection of learning resources the central library provides following offline and online services through nineteen well defined sections:

- Refence and Referraler
- Document delivery service under CeRA Book Bank
- Wi-Fi Facilities
- Current and Bound Journals (Print)
- Thesis and Dissertation
- Photocopy
- Audio-visual
- Internet surfing
- Inter-Library Loan
- Computerized Circulation
- Current Awareness

Library Extension Activities:

The Central Library does not remain confined to the traditional library services only, but takes the privilege of providing library extension services in various ways for the benefit of the user community. These are as follows:

Library Orientation programmes - AV demonstrations are arranged every year for the freshers as a part of the library orientation programme.

DDR Services - To provide DDR service to the students, research scholars of the other ICAR institutions and SAUs are being done regularly through the CeRA platform.

Theses Repository - Uploading of soft copies of theses are being done regularly through 'Krishikosh' platform of ICAR to make the institution's intellectual output visible globally and to increase the strength of the knowledge network of the agricultural scientist.

NATIONAL SERVICE SCHEME

National Service Scheme, popularly known as NSS was launched in Gandhiji's Birth Centenary Year in 1969 under the Ministry of Youth Affairs & Sports, Govt. of India.

At Bidhan Chandra Krishi Viswavidyalaya, it is being run since the inception of the University. The basic objective of the NSS is to arouse and enrich the social consciousness among students and youths. The scheme is intended to provide an opportunity for the students to engage in constructive social action, programmes, develop co-operative team spirit and gain skills in democratic leadership quality. Presently NSS - BCKV comprises of 5 units,-3 at Mohanpur and 1 at each of college of Agriculture (extended campus) at Bardhaman and Susunia, Bankura with the Headquarter at Mohanpur. Each unit is headed by the Programme Officers with the guidance of Programme Co-ordinator. Near about 1000 NSS volunteers are actively participate in various activities in all the campuses along with other academic curriculum.

NSS course is included in the syllabus as compulsory course in under graduate with 0+1 credit. The NSS volunteers regularly observes the Red letter Days of National and International importance along with the all other volunteers of the country as mandatory programme proposed by the NSS Directorate. Besides, the programmes of local demand are also observed. Each and every year, the NSS unit of our university celebrated Independence Day, Republic Day, Vivekananda Birthday (National Youth Day), International Youth day, World Yoga Day, National Unity Day (Birthday of Sardar Ballavbhai Patel) and Agriculture Education Day (Birthday of Dr. Rajendraprasad), etc. They also observe University Foundation Day (1st Sep) and Birthday of Dr. B. C. Roy (1st July).

Besides these programmes, the volunteers regularly attend special camps on Swachh Bharat Aviyan, Swachh Bharat Pakhwara, Rural Education Programme in nearby villages, Rural Hygiene, Development of Nutrition Garden in primary school, distribution of winter clothes among poor villagers, Planting of Trees (Vanamahotsava), Awareness camp on mosquito transmitted diseases, Save and Educate Girl child (*Beti Banchao-Beti Padao)*, Parthenium Awarness Week, HIV/AIDS Awarness and Blood Donation Camp, etc. in each year. During the programmes different competition like poster and slogan making, essay writing, etc. are arranged and all successful candidates are awarded. After completion of the course the volunteers are given NSS certificate duly signed by the authority. Certificate of excellence is given to the best performer volunteers

RED RIBBON CLUB

In 2009 a unique programme was launched by the West Bengal State AIDS Prevention & Control Society to boost up the fighting spirit against HIV/AIDS by involving the young generation in the awareness campaign against HIV/AIDS. Under this programme.BCKV is also the member of the club. All the mandated programmes are observed in the university by the NSS volunteers.

NSS ACTIVITIES DURING THE ACADEMIC YEAR OF 2022-23

REGULAR ACTIVITY

 Tree Plantation Programme*:* 100 saplings of different fruit and flower trees were planted by the NSS Volunteers on 15 June, 2022 in presence of Honorable Vice-Chancellor and other officials of BCKV.

 International Day of Yoga: NSS-BCKV observed the International Day of Yoga on 21st June 2022 at Mohanpur campus in Jagadish Abas from 8 am. Honourable Vice Chancellor, BCKV inaugurated the Yoga camp. A Yoga trainer and her team showed some the yogasana, pranayama and free hand exercises to NSS volunteers and also described its usefulness. Programme Oficers, , Provosts of boys & girls hostels and about 300 volunteers were present and nicely organized the programme. Prof. Anupam Pariari Programme Co-ordinator, NSS, BCKV gave a brief note about the importance of this day of celebration. Participation of NSS volunteers was spontaneous and appreciable.

 Swachh Bharat Pakhwada: NSS-BCKV observed Swachh Bharat Pakhwada during the period from1st to 15th August, 2022 with the active initiative and participation of all the departments and divisions of the university. NSS volunteers along with teachers, officials took oath to keep university and our country clean on 1st August and took initiative to clean university and adjoining area regularly. Volunteers kept a keen eye and actively participated on cleaning of respective campus, offices, class rooms, faculty buildings, farms, hostel premises with an appeal of 'Green Campus- Clean Campus'.

 Independence Day Celebration: On 15th August 2022, NSS-BCKV observed Independence Day in all the campuses, BCKV with full enthusiasm. The Honorable Vice Chancellor, BCKV hoisted the National Flag in the Mohanpur campus. The volunteers participated in a colourful rally, flag hoisting, cleaning campuses, tree planting etc. The celebration ended with a beautiful cultural programme in presence of NSS officials and the teachers and other employees of BCKV in the Convocation Hall.

Birthday of Dr. Bidhan Chandra Roy: Birthday of Dr. Bidhan Chandra Roy on 1st July 2022, has been celebrated at BCKV, Mohanpur campus. Honorable Vice-Chancellor, BCKV presided over the function. The programme started with garlanding to the statue of Dr B. C. Roy followed by valuable speeches of different dignitaries present in the occasion. Cultural Programme, Poster Competition and Refreshment at the end was also arranged.

 World Aids Day: A special camp was organized on 1st December, 2022 at BCKV to make awareness among the students about the HIV/ AIDS. An, Expert on HIVS/ AIDS delivered a special lecture on this topic. A folk team associated with the Department of Health and Welfare, Govt. of West Bengal presented a short drama on this topic to make aware the NSS volunteers about this deadly disease.

 Swachchha Bharat Aviyaan: NSS volunteers participated in a venture to keep clean their campus regularly under the supervision of NSS Officials during their NSS classes and holidays. A special drive was given on 02 December 2022and 09 December 2022. On those days, they made a rally with relevant posters and slogan to develop consciousness among the

local people, as a routine class volunteers started the cleaning venture from their classroom, laboratories etc. and then proceed to surrounding areas for dusting of bleaching powder, cleaning and vacating of stagnant water pots to control mosquitoes, cleaning of Parthenium weed etc.

 Republic Day: On 26th January 2022 NSS-BCKV observed Republic Day in the three campuses of BCKV with full enthusiasm in associations with all the divisions of the university. NSS volunteers and all other students participated in rally, flag hoisting, cleaning campuses, tree planting, etc. and the celebration ended with a beautiful cultural programme.

 BCKV Foundation Day**:** On 1st September. 2022, NSS-BCKV observed BCKV Foundation Day in all the 3 campuses of BCKV .NSS volunteers and all other students participated in yhe programme including a cultural programme

 Camp on First Aid Awareness**:** One day camp was arranged on 10th June. 2022 at J. N. M. Hall, Mohanpur for the NSS volunteers with the guidance of Medical team of BCKV on first aid. DR K. Chatterjee and his associates trained the volunteers the art of first aid. All the NSS officials were present in the camp.

 Awareness Training on Controlling Fire**:** At Mohanpur Campus, NSS Unit, BCKV organized an awareness programme on 'How to Control Fire?' on 22 July, 2022 at their scheduled morning class. University Security Officer, as an expert, showed them how to use fire extinguisher and gave a wonderful demo to the NSS volunteers.

Celebration of Teachers' Day at BCKV

Fruit Festival, 2022 at BCKV

Sport Day at BCKV

Celebration of Yoga Day at BCKV

Variety / Protocol/ Patent/ Technology development (2022–23) — highlights

1. **New Mustard Variety Developed**

   Trombay Bidhan Mustard-143 (TBM-143) was developed and officially notified in the Gazette of India [S.O. 4065(E), 31.08.2022]. It is a semi-dwarf, early maturing type mustard variety, with high density pods, appressed in position, and average seed yield of 1800 kg/ha. It is moderately resistant to Alternaria leaf spot and aphid infestation. The most vital feature of TBM-143 is high oil content (41.3%) with yellow seed coat and does not lodge or shatter at maturity.

2. **New Brinjal Variety Released**

   Bidhan Suphala brinjal variety was developed and officially notified in the Gazette of India [S.O. 3254(E), 20.07.2022]. Early, Long, deep-purple coloured,soft textured, less seeded, spineless & high yielding variety. It is moderately field resistance against bacterial wilt disease and field tolerance against fruit and shoot borer (130 days duration)

3. **Extension of shelf life of fresh flower buds of tuberose**

   Fresh tuberose flower buds treated with 2–4% boric acid or 10% sodium benzoate using the quick dip method, surface dried, and packed in butter paper-lined and aluminum foil-lined cardboard boxes (placed in thermocol containers with ice gel), maintained significantly higher shelf life under ambient conditions (27–30°C, 80–85% RH). (Published in Proceedings of the XXX Annual Group Meeting of AICRP on Floriculture, January 12-14, 2022)

4. **Tinting of Tuberose Spikes**

   The use of a solution containing 2% sucrose with either 200 ppm Aluminum sulfate or citric acid yielded the highest vase life (over 4 days) for all the three food dyes. (Published in Proceedings of the XXX Annual Group Meeting of AICRP on Floriculture, January 12-14, 2022)

5. **Dry Storage of *Nephrolepis exaltata***

   Optimal vase life was achieved when cut fronds were packaged in polyethylene or polypropylene bags and cold stored at 4°C for five days. (Published in Proceedings of the XXX Annual Group Meeting of AICRP on Floriculture, January 12-14, 2022)

6. **Solid-State Fermentation for Carotenoid Extraction from Marigold**

   Fermenting fresh marigold flowers with calcium lactate (10 g per 100 g flowers) for 30 days led to higher retention of carotenoids and phenolics (16.25% recovery), with high acceptability scores across majority centers. (Published in Proceedings of the XXX Annual Group Meeting of AICRP on Floriculture, January 12-14, 2022)

7. **Development of Lentil Variety**

   Bidhan Lentil 16 (BL16), developed from LL56 x LL4710 is released vide Gazette notification, S.O. 4065(E) of 31.8.2022. The mean yield is 1552 kg/ha, almost 10% higher than the existing popular cultivar, WBL77. It is a dwarf (40 cm) and erect variety with small seeds (100 seed weight: 2.0 g) and a short duration (109-115 days), exhibiting terminal heat tolerance.

8. **Nutrient management for productivity enhancement in dual purpose Oats**

   A combination of 75% RDN (60 kg N/ha), vermicompost @ 2 t/ha, PSB (1.5 kg/ha soil application), Azotobacter (10 g/kg seed), $ZnSO_4$ (20 kg/ha), and a foliar spray of 0.5% $ZnSO_4$ before flowering enhanced green forage yield, quality, and profitability of oats across multiple locations during Rabi 2018–2021. (Certificate of Appreciation -2022 by ICAR-AICRP on Forage Crops & Utilization for technology generation)

9. **Organic nutrient management in Ricebean-Oat system under irrigated situation**

   Application of 50% RDN via FYM + 50% via vermicompost under irrigated condition significantly increased productivity and quality in Rice Bean-Oat system. Compared to full inorganic RDN, this treatment enhanced 23.4%, 53.2%, and 39.1%, green forage, dry matter, and crude protein yield respectively. It also resulted in net returns of Rs. 80,000/ha (B:C ratio: 2.18), with slight improvements in soil pH, organic carbon, and microbial biomass as compared to initial status. *(ICAR-IGFRI Annual Report 2022–23)*

10. **Variety Registration of White Jute – BCCC-1**

    Registered under Plant Variety Protection Act (Reg. No: REG/2020/18, dated 14.02.2022).

11. **Notification of Tossa Jute Variety – BCCO-13 (Bidhan Paat 13)**
    The Tossa Jute Variety – BCCO-13 (Bidhan Paat 13) developed under Notification No. 3-83/2022-SD. IV (27.07.2022). BCCO-13, developed via pure line selection from OEX-13, is high-yielding, biotic stress tolerant, and has superior fiber quality. It is suitable for the jute-rice cropping sequence, especially in rainfed areas of West Bengal, Assam, Bihar, and Odisha.

12. **Extended Shelf Life of Mango Using Gamma Irradiation:-**

    Application of gamma irradiation at 0.75 kGy followed by hot water treatment (HWT) at 45°C for 10 minutes and storage at 8°C extended the shelf life of mangoes—25–30 days for 'Himsagar' and 45–50 days for 'Lakshmanbhog'. *(Source:* Proceedings released by PRC, BARC-BRNS, Mumbai, India)

13. **Pulse-Enriched Fruit Bars and Toffee:**

    Developed mango, jackfruit, and Palmyra palm-based bars and toffees enriched with pulses under the IFAD-ICARDA sponsored project at BCKV, Mohanpur, Nadia. (*Source:* Annual Report of IFAD-ICARDA sponsored project on pulses (Enhancing food and nutritional security-pulse crops in South Asia, 2021-22)

14. **Management of Epilachna Beetles in Potato:**

Two foliar applications of Cypermethrin 25 EC @ 0.04% (40 ml/100L water), at 15 days intervals are recommended for effective management of Epilachna beetles in potato crops, in the new alluvial zone of West Bengal. *(Notification No. F.No.PC/40th Group Meeting, ICAR-CPRI, Shimla,)*

15. **Registration of Aromatic Rice Variety:**

Radhunipagal, a traditional aromatic rice, has been registered as a Farmers' Variety (REG/2016/1677, dated 11.05.2022) with Dr. Md. Kudrat-E-Khuda Gramin Vigyan o Prajukti Vikas Kendra, Margram, Birbhum under Protection of Plant Varieties and Farmers' Rights Authority (PPV& amp; FRA), Government of India. The average yield potentiality is 2.2-2.5 t/ha. The white-coloured kernels were short-bold (length 3.6-3.7 mm and width 1.9-2.0 mm) in shape, and the cultivar had low amylose content (17.0%), medium gelatinization temperature (alkali value 3.2) and medium-strong or strong aroma.

16. **Weed Management in Maize:**

Application of Atrazine @ 750 g/ha pre-emergence, followed by Topramezone @ 25.2 g/ha at 25 DAS, and a mix of Topramezone + Atrazine at 15 DAS was found most effective with a high benefit-cost ratio during the Rabi season in the new alluvial zone of West Bengal. *(AICRP on Maize Annual Report, Rabi 2022–23)*

17. **Integrated Disease Management (IDM) Strategy for Maize:**

An IDM protocol—seed treatment with *Trichoderma harzianum* @ 10 g/kg seed, followed by foliar sprays of *Pseudomonas fluorescens* @ 10 g/L at 35 DAS, Amistar Top (Azoxystrobin 18.2% + Difenoconazole 11.4%) @ 1 ml/L at 40 DAS, and cow urine (20%) at 50 DAS—was effective for managing major maize diseases, especially Maydis Leaf Blight, and boosting yield. *(Annual Progress Report, Kharif,2022)*

18. **Biological Management of Root-Knot Nematode in Rice:**

Nursery bed treatment with *Pseudomonas fluorescens* (20 g/m², 2×10^8 cfu/g) effectively managed *Meloidogyne graminicola* in transplanted rice. *(Published in the Proceedings of the Annual Review Meeting, AICRP on Nematodes in Agriculture, August 27, 2021).*

19. Validation of customized fertilizers in sweet potato:

Soil application of customized fertilizer two times @ 325 kg/ha as basal and @ 325 kg/ha as top dressing 1 month after planting along with foliar application of Micronol Sweet Potato @ 5 ml/lit three times at 15, 30 and 45 days after planting was proved to be the best treatment for achieving highest marketable tuber yield and B:C ratio (2.89). (Source: 22nd AGM of ICAR-AICRP on Tuber Crops, 2022)

20. Nutrient requirement of swamp taro:

The highest average length (119.42 cm) and girth (4.76 cm) of stolon during final harvesting, and maximum yield of stolons (29.26 t/ha) were recorded with FYM 15 t/ha + N-P_2O_5-K_2O 120-60-120 kg/ha), followed by FYM 15 t/ha + N-P_2O_5-K_2O 120-60-90

kg/ha**)**. The highest pseudostem yield of 16.81 t/ha was also recorded with FYM 15 t/ha + N-P_2O_5-K_2O 120-60-120 kg/ha) closely followed by 16.31 t/ha with FYM 15 t/ha + N-P_2O_5-K_2O 120-60-90 kg/ha**.** (Source: 22nd AGM of ICAR-AICRP on Tuber Crops, 2022)

Field view of aromatic rice variety Radhunipagal

Bidhan Suphala (Brinjal)

Field view of lentil variety Bidhan lentil 16

Field view of Tossa Jute Variety – BCCO-13 (Bidhan Paat 13)

View of appressed type of siliqua of TBM-143

FACILITIES DEVELOPED

Sl. No.	Facility/Development	Location/Project	Details
1	Dragon Fruit Orchard (0.5 bigha)	RRS (CSZ), Kakdwip	Moroccan, Vietnam Red, and White Pulp varieties planted (May 2022)
2	Papaya & Banana Orchard (0.25 bigha)	RRSS, BCKV, Raghunathpur	Local varieties planted (June 2022)
3	RIDF-XX Project Infrastructure	RRSS, BCKV, Raghunathpur	Agricultural development & livelihood security
4	Banana Germplasm Block (700 sqm)	RRSS, BCKV, Sekhampur	Conserves ABB & AAB group bananas
5	Aonla Germplasm Block (1 acre)	RRSS, BCKV, Sekhampur	Maintains 6 cultivars (Krishna, Kanchan, NA-6, NA-7, NA-10, Chakaiya)
6	Mango In-situ Grafted Orchard (2 acres)	RRSS, BCKV, Sekhampur	Amrapalli grafting successfully done
7	Grapes Orchard & Tea plantation (200 plants)	RRSS, BCKV, Sekhampur	Research on integrated pest/nutrient management
8	Musambi Orchard with Mulching	RRSS, BCKV, Sekhampur	Improved soil health, weed control
9	Mango Orchard Development	RRSS, BCKV, Sekhampur	Integrated pest/nutrient management
10	Guava Orchard Rejuvenation	RRSS, BCKV, Sekhampur	Bending technology demonstrated
11	Pomegranate Orchard with Intercropping	RRSS, BCKV, Sekhampur	Intercropped with onion and chia
12	Germplasm Maintenance (Mungbean, Urdbean, Lentil, Lathyrus, Rice)	RRS (CSZ), Chakdaha	Mungbean (230), Urdbean (114), Lentil (1200), Lathyrus (277), Rice (75), Scented Rice (30)
13	Soil Testing Laboratory (4000 sft)	Dept of Agricultural Chemistry & Soil Science)	RIDF funded; Capacity 5000 samples/year
14	Laboratories (Micro-, Secondary Nutrients, & Pollutant Elements in Soils and Plants & STCR)	AICRP Laboratories	RIDF Funded; Shifted from Kalyani Research Complex
15	Soil-Water Testing Facility	AICRP-STCR	State-of-art facility funded by RAFTAAR (STCR)
16	DNA Fingerprinting Centre for Root & Tuber Crops; Tuber Crops Field Gene bank	Mondouri Farm, BCKV (AICRP)	ICAR funded; & 423 germplasms maintained
17	Wheat Pathology Laboratory	Dept. of Plant Pathology	Upgraded with PCR and digital weight balance (RNARC & CIMMYT funding)

Sl. No.	Facility/Development	Location/Project	Details
18	New Vegetable Crops Lab (400 sq. ft.)	Dept. of Plant Pathology	Biochemical and pathological facilities
19	Germplasm Block	Dept. of Plant Pathology	One of 1000 sqm area with 500 germplasms ;another with 30 germplasm of aromatic and local rice
20	Agroforestry Field (8000 sqm)	Jaguli Instructional Farm	Developed for soil & water conservation
21	Testing & Training Centre (790 sq.m) for Food & Water Quality	Agricultural Chemicals	under RIDF-XX project
22	Germplasm Maintenance & developed One (01) well-equipped laboratories	Dept of Genetics and plant Breeding, Mohanpur	Rice (557), lathyrus (277), cowpea (40), chickpea (400), 114 urdbean (114), 230 mungbean (230), 200 mustard (200), and 1479 Lentil (1479) RILS of Rice (5) and lentils (1).
23	Nematodes in Agriculture laboratory	Dept. of Agricultural Entomology	AICRP on Nematode
24	New Entomology Laboratories (1200 sq ft); Corcyra Mass production laboratory (180 sq ft) & Insect Museum	Agricultural Entomology	Labs for mass insect and Corcyra production and museum with local species;
25	Development of one classroom for post graduate (680 sq ft)	Dept. of Agronomy	For PG classes
26	Hydroponics System, Polyhouse (300 m^2); Germplasm blocks	Dept of Vegetable Science	Vegetable production; tomato (50), brinjal (38), chilli (35), fava bean (45), snake gourd (30) & Sponge gourd (25)
27	Post-Harvest Tech Laboratory	F./Horticulture	Dept. of Post harvest Management
28	Plant Tissue Culture Lab Renovation	Dept. of Fruit Science	Renovated under Faculty of Horticulture
29	Germplasm blocks (Hybrid Tea Rose, Damask Rose, Turf Grass)	Dept of Floriculture & Landscaping	20 Hybrid Tea, 2 Damask Rose, 12 Turf Grass
30	Vegetable Germplasm Block (Various Crops)	AICRP on Vegetable Crops	Teasle gourd (18), Pointed gourd (29), Tomato (56), etc.
31	Golden Jubilee Forage Garden (800 m^2)	AICRP on Forage Crops	Developed with Ricebean Germplasm (250)
32	Laboratory developed (100 sq.m); maintenance of germplasms of different crops	AICRP on MULLaRP	Mungbean (230), Urdbean (114), lentil (1200, lathyrus (277)
33	Two laboratories developed of 250 sq.ft each; Chickpea Genotypes Maintenance (440)	AICRP on Chickpea	Including ICRISAT reference set
34	Bioassay Lab Setup on Jute	AINP JAF	Artificial bioassay and fibre traits studies

Sl. No.	Facility/Development	Location/Project	Details
35	Agroforestry Model (1 hectare)	RRS, Jhargram	Gmelina-Ber Model developed
36	Gradient PCR purchased and Wheat Germplasm Maintenance	AICRP on Wheat & Barley	272 germplasms maintained
37	Developed laboratories; Orchard & Nursery Development (Banana, Mango, Jackfruit, Guava, Litchi)	ICAR-AICRP on Fruits	For Plant protection purpose; 1.5 ha plantation expanded
38	Model value addition of flowers and processing centre	AICRP on Floriculture	Funded by RKVY Model Centre at Karmathirtha Building
39	Extensive Floriculture Germplasm Blocks (Tuberose, Marigold, Chrysanthemum, etc.)	AICRP on Floriculture	Total blocks for 12 flower types
40	Pathological and Agronomy Labs Setup; Germplasm blocks (1000 sqm)	AICRP on Maize	500 germplasms
41	Nematodes Laboratory	AICRP on Nematodes	Newly established at Mohanpur
42	Spices Germplasm blocks (Aromatic Turmeric, Fenugreek, Coriander)	AICRP on Spices	Maintained and evaluated
43	Acarology Laboratory (Mites Research)	AICRP on Acarology	Setup in Agricultural Entomology, Mohanpur
44	Cashew Plantation (1 ha) and F1 Orchard (0.13 ha)	AICRP on Cashew	16 genotypes planted
45	Weed Management Laboratory (1500 sq. ft.)	AICRP on Weed Management	Developed for weed studies
46	Betelvine Germplasm Maintenance (54 Cultivars)	AICRP on MAP & Betelvine	Collections from all over India
47	Bamboo-Based Mushroom House	AICRP on Mushroom	Developed and maintained
48	Infrastructure Development (Classrooms, Labs, Seminar Halls); Germplasm block (980 sq.m)	Bankura Centre	Four classrooms, two exam halls , one conference hall (each ~110 m^2) Rice Landrace Germplasm (186 varieties)

HEALTH CENTRE

The BCKV Health Centre provides free medical advices, free investigations and required medicines to the students of this University. Staff and their family members are benefited with free medical advice, investigations with nominal charges along with emergency medicine only.

FACILITIES AVAILABLE:

- ***Consultancy /expertise opinion***: Students, staff and their family members are directly seen and addressed by the university doctor, bckv, health centre.
- Supply of available medicines to the students only.
- Dressing of cuts, wounds, burns etc. are done in proper sterilised manner.
- Kepping of patients under observation.
- X-ray with reports.
- ECG with reports.
- Baseline and advanced pathological–cum-biochemical: lipid profile; thyroid hormones; uric acid; other hormonal assays.
- 24 x 7 services of university ambulance.
- Nebulisation facility
- Oxygen inhalation facility

Overall the unit is trying to touch life.

VARIOUS MEDICAL ACTIVITIES:

- Bidhan Chandra Krishi Viswavidyalaya HEALTH CENTRE, a small OPD Unit, unique of its own, along with its staffs are serving the students and employees (including their dependents) of this University throughout the year.
- The students who mostly reside in the hostel (except very few) are served with First-Aid & various other medical necessities with the available resources of this centre.
- On an average of around 50 students are treated and advised in a week from this centre. Apart from that the students also get benefited by expertise opinion beyond office hour.
- This unit is also well equipped with certain diagnostic tools and at the same time providing with some baseline investigations of Blood profile.
- As previous years, this year also the Medical Unit has examined the new admissions of students in under graduate and post graduate levels.
- In the year 2008, a number of modernize and advanced diagnostic equipments were purchased for this Health Centre namely “AUTO ANALYSER”, “COMPUTERISED

ECG MACHINE" & "X-RAY MACHINE" from Student Amenities Grant ICAR which are now functioning to meet the necessities of the patient. Apart from this in the year 2010 "HEMATOLOGICAL AUTO ANALYSER" and "ULTRA SONOGRAPHY MACHINE" was purchased to boost up the diagnostic facilities of this unit. The old X-Ray Machine was changed to Digital X-Ray machine which was purchased in the year 2016.

The Dispensing

Counter X-Ray Unit

Statistics about services in the year 2022 (Calculated on average basis):

Sl. No	Patients	Working days	Monthly	Yearly
1.	08	26	208	2496
2.	2	26	52	624
3.	2	26	52	624
4.	1	26	26	312
5.	1	26	26	312

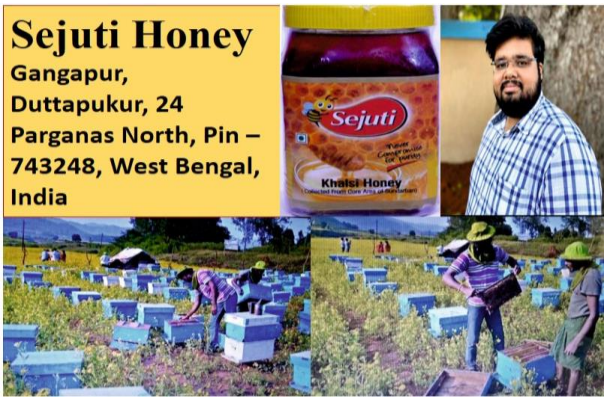
Pathological Unit

PLACEMENT CELL ACTIVITES

The Placement Cell serves as a vital link between students and potential employers. It oversees all skill development activities related to placement and regularly updates students with targeted career information and job openings across various sectors. This information is disseminated through the university website and on-campus channels. Based on advertisements from agrochemical companies, private firms, NGOs, and other sectors, candidate selection is carried out through interviews—either online or offline—conducted by the respective organizations.

Details of agencies/organisation where students got placement

SN	Name of the Faculty	ICAR	CAU/SAU	Central Govt.	State Govt.	PDF/ Foreign	Pvt./ Others
1.	Agriculture	3	1	40	6	6	32
2.	Horticulture	0	0	13	0	0	4
3.	Agricultural Engineering,	0	0	3	2	0	3
	Total	**3**	**1**	**56**	**8**	**6**	**39**



List of M.Sc. Thesis Submitted at BCKV 2022

Faculty of Agriculture

Sl. No.	Name of the student	Thesis title	Name of the chairman
		Department of Agronomy	
1.	Dhee Jana	Response of chickpea *(Cicer arietinum L.)* to mulching and nutrient levels in new alluvial zone of West Bengal	Dr. K.Murmu
2.	Suchismita Sahoo	Effect of different herbicides on the performance of summer paddy in new alluvial zone of West Bengal	Prof.B.C.Patra
3.	Tuhina Mahfuj	Effect of seaweed extracts and plant growth regulator on productivity and quality of potato grown under zero tillage and mulching in coastal saline soil of West Bengal	Prof. K. Brahmacari
4.	Ayantika Choudhury	Diversification of rice - rice cropping system with land shaping in new alluvial zone of West Bengal	Dr. M. Ray
5.	Sahin Ikbal	Effect of nano dap on growth, yield and economics of kharif rice	Prof. D. Dutta
6.	Sanjivani Karki	Effect of organic nutrient management on aromatic rice cultivars in hill zone of West Bengal	Prof. M. Ghosh
7.	Amrita Sarkar	Crop performance and production economics as influenced by various weed management measures in common bread wheat (*Triticum aestivum L.*) grown in new alluvial loamy soil	Dr. B. Mandal
8.	Debjyoti Ray	Agronomic fortification with zinc and iron in field pea (*Pisum sativum* L.) in the lower gangetic plains of West Bengal	Dr. S. Mondal
9.	Sunan Bakli	Studies on new molecules of growth enhancer on groth, grain yield, grain quality and economics of local scented rice	Prof. M.Pramanick
10.	Avimanyu Palit	Effect of zinc application on groth tuber biofortification and productivity of potato (*Solanum tuberosum* L) in inceptisols	Dr. S.K. Das
11.	Shibani Kisku	Effect of different doses of sulphur and growth hormone on growth and yield of niger	Dr. S.K.Gunri
12.	Uday Layek	Efficacy of different pre and post - emergence herbicides for broad spectrum weed management in chickpea (*Cicer arietinum* L.)	Dr. Md. Hedayetullah

Sl. No.	Name of the student	Thesis title	Name of the chairman
13.	Abhishek Roy	Response of greengram varieties to foliar application of zinc and boron	Prof. S.K. Muhkopadhyay
14.	Nasir Hossain Mondal	Effect of nano urea foliar spray on wheat varietal lines in new alluvial soil	Prof. S.B. Goswami
15.	Sagarika Hasda	Effect of different doses of sulphur and micronutrients association on growth and yield of safflower (*Carthamus tinctorius*l.)	Dr. S.K. Gunri
16.	Mrinmay Ray	Choice of vegetable smother crops for weed management in flax	Dr. S. Das
17.	Subhadeep Karak	Effect of foliar nutrition on kernel yield and forage quality of kharif groundnut (*Arachis hypogaea* L.)	Dr.K. Jana
18.	Somdatta Achar	Effect of sowing dates on phenology, growth and yield of fieldpea varieties in lower gangetic plains of West Bengal	Prof. M. Ghosh
19.	Sudipta Sarker	Evaluation of blackgram genotypes under late kharif situation in red and laterite zone of West Bengal	Dr. S. Banerjee
20.	Swapnadip Bose	Deficit irrigation management in maize - based intercropping system for higher crop and water productivity	Dr. R. Poddar
21.	Sourajit Dey	Agronomic biofortification of lentil (*Lens culinaris* L.) with iron and zinc in the tropical plains of india	Dr. S. Maji
22.	Elora Bag	Influence of different levels of boron and sulphur on growth, yield and oil content of niger (*Guizotia abyssinica*)	Prof. C.K. Kundu
23.	Shambhunath Ghosh	Evalution of indian mustard varieties in new alluvial zone of West Bengal	Prof. R. Nath
24.	Sophia Swain	Effect of nano dap on growth, yield and economics of rapeseed	Prof. D.Dutta
25.	Koushik Sinha Mahapatra	Effect of crop establishment method and nitrogen rate on spring sunflower (*Helianthus annuus* L.) in coastal region of West Bengal	Prof. H. Banerjee
26.	Devaraj	Effect of seed rate and seed priming on field pea (*Pisum sativum var. Arvense*) grown under surface seeding in the rice fallow of lower gangetic plains	Prof. P. Bandopadhyay
27.	Rupam Mondal	Effect of foliar nutrient management on productivity and quality of potato grown under zero tillage and mulching in costal saline soil of West Bengal	Prof. K. Brahmacari

Sl. No.	Name of the student	Thesis title	Name of the chairman
28.	Md Anwar Ali	Effect of different weed management practices on weed dynamics, growth and yield of lentil (*Lens culinaris medic.*)	Dr. S.Sarkar
29.	Surajit Barman	Effect of zinc sulphate foliar spray on wheat varietal lines in new alluvial soil	Prof. S.B. Goswami
30.	Sourav Ghosh	Performance of kharif rice varieties in new alluvial zone of West Bengal	Prof. R. Nath
31.	Sreeja Namasharma	Effect of nano - fertilizer for increasing nutrient use efficiency, yield and economics in hybrid rice	Prof. S. Pal
32.	Mayukh Bhattacharyya	Effect of integrated nutrient management on baby corn (*Zea mays L.*) in New Alluvial Zone of West Bengal	Dr. S. Biswas
		Department of Agricultural Chemistry and Soil Science	
1.	Debajyoti Das	Effect of cypermethrin and tebuconazole on soil enzymes and microbial activity of costal saline and new alluvial soils of West Bengal	Prof. T. Biswas
2.	Santanu Sarkar	Effect of iron slime waste on availability of primary nutrients in relation to growth and yield of kharif onion in lateritic soil	Prof. S.K. Ghosh
3.	Subhra Kanti Maiti	Effect of biofertilizers and fym on microbial proliferation, uptake of nutrients and yield of green gram	Prof. S.C. Kole
4.	Jayashree Dey Sarkar	Aggregate associated soil organic carbon under short term conservation agriculture	Prof. P.K. Bandyopadhyay
5.	Susmita Chakraborty	Assessing spatial variability of soil fertility and nutrient indexing in some soil series of new alluvial zone of West Bengal	Prof. K. Bhattacharyya
6.	Ankita Hansdah	Evaluation of method and time of application of zinc for rice (*oriza sativa* l.)	Dr. S.Mondal
7.	Nafisa	Target yield based fertilizer prescription equation for garden pea (*pisum sativum*) in inceptisol of West Bengal	Dr. H. Saha
8.	Karishma Parida	Establishment of phosphorus threshold for soils of west bengal	Prof. S.K.Pal
9.	Romita Maji	Phospphorus sorption, desorption kinetics and hysteresis index of red - laterite soils of West Bengal	Prof. S.K.Pal
10.	Sujit Kumar Bhunia	Effect of slag based gypsum on availability of secondary and cationic micronutrients in relation to growth and yield of kharif onion in lateritic soil	Prof. P.K.Patra
11.	Samrin Parveen	Yield and uptake of micronutrients by rice as	Prof. K.

Sl. No.	Name of the student	Thesis title	Name of the chairman
		influenced by duration of variety and nitrogen fertilization	Bhattacharyya
12.	Ankita Roy	Effect of iron slime waste on availability of secondary and cationic micronutrients in relation to growth and yield of kharif onion in lateritic soil	Prof. S.K. Ghosh
13.	Rishabh Roy Gupta	Effect of the applied ph on the generated p^H in the rhizosphere, dry matter weight and nutrient uptake of green gram and rice in nutrient solution	Prof. P.K.Mani
14.	Baby Ray	Assessment of soil quality in intensively cultivated soil of purbabardhaman, West Bengal under rice - rice cropping system	G. C. Hazra
15.	Rohit Kumar Das	Effect of slag based gypsum on availability of primary nutrients in relation to growth and yield of kharif onion in lateritic soil	Prof. P.K.Patra
16.	Sushovan Paul	Assessment of soil quality of salt affected soils in coastal belt of West Bengal	Prof. G. C. Hazra
17.	Kaviya Sri S	Distribution of forms of phosphorus in soil under a long - term fertilizer experiment	Dr. K. Batabyal
18.	Sujan Bhowmick	Depth wise distribution of oxidizable organic carbon in soil under a long - term fertility experiment	Dr. S. Murmu
19.	Soubhik Pal	Nutrient uptake in crops in relation to p - levels and rhizosphere ph	Prof. A. Debnath
20.	Sourav Mandal	Assesing soil quality indices under different land situations in red and lateritic zone of west bengal	Dr. S. Saha
		Department of Agricultural Chemicals	
1.	Utkrist Gurung	Monitoring of multiclass multi - pesticide residues in fish matrices procured from different markets in West Bengal	Dr.R. Karmakar
2.	Akhlak Sk	Development of a multiresidue method for analysis of multiclass pesticides in cucumber by liquid chromatography tandem mass spectrometry	Dr. S. Roy
3.	Subhrautpal Karmakar	Residue kinetics of insecticide pymetrozine in soil	Dr. R. K. Kole
		Department of BIOCHEMISTRY	
1.	Tulika Sarkar	Physico - biochemical properties of a few aromaticrice landraces of the eastern India	Dr. J.Dutta
2.	Subhajit Sengupta	Morphological and biochemical characterization of grass pea (*lathyrus*	Dr. J.Dutta

Sl. No.	Name of the student	Thesis title	Name of the chairman
		sativus l.)	
3.	Shashi M. Sagar	"Immobilization of some glycosidic enzymes"	Dr. J.Dutta
		Department of Genetics and Plant Breeding	
1.	Nikita Das	Morpho - biochemical and molecular characterization of West Bengal landraces of gradd pea (*Lathyrus sativus* L.)	Dr. A. Das
2.	Anindita Mondal	Screening of some advanced breeding lines of wheat (*Triticum aestivum* L.) Grown under plain of West Bengal	Prof. S. Mukherjee
3.	Afridi Mondal	Genetic evaluation and selection of sunflower (*Helianthus annuus L.*) Hybrids based on economic heterosis	Prof. S. Mukherjee
4.	Shreya Brohma	Genetic variability studies on jute agro morphological traits and seed quality attributes in *corchorus capsularis* L.	Dr. A. Roy
5.	Perkari Rahul	Genetic variability studies on jute agro morphological traits and seed quality attributes in corchorusolitorius	Dr. A. Roy
6.	Arunava Majumder	Role of rca gene on yield and yield attributing parameters of rice under low light intensity	Prof. R. Sadhukhan
7.	Biswadeb Ghosh	Evalution of some advanced breeding lines for yield attributing traits and spot blotech disease resistance in wheat	Dr. A. Maji
8.	Avijit Mukherjee	Ssr based dna fingerprinting and dus characterization of some potato accessions	Dr. S. Sarkar
9.	Saroj Laha	Green synthesis of silver nanoparticles, their characterization and assrssment as plant growth regulator in vitro syestem	Dr. S. Gantait
10.	Rimpa Kundu	Gwas for seedling cold tolerance in rice (*Oryza sativa* L.)	Prof. S. Bhattachryya
11.	Jyoti Sankar Padhy	Study on compatibility of indigenous rhizobium isolates on greengram genotypes	Dr. D. Saren
12.	Mohar Debnath	Identification of stable advanced breeding lines in blackgram (*Vigna mungo* L.) Hepper	Dr. P.K. Bhattacharyya
13.	Sandipan Majumdar	Genetic study of chickpea in relation to mechanical harvesting	Prof. R. Sadhukhan
		Department of Agricultural Meteorology and Physics	
1.	Manjarul Sk	Effect of dates of planting on crop water productivity and radiation use efficiency of three potato cultivars in new alluvial zone of West Bengal	Dr. A. Mukherjee

Sl. No.	Name of the student	Thesis title	Name of the chairman
2.	Md Sahid Anwar	Study on impact of solar radiation on major phenological stage of boro rice over new alluvial zone of West Bengal	Prof. L. Das
3.	Bulet Hembram	Effect of nano - fertilizer on sustainable rice (*Oryza sativa* L.) Production in red and lateritic agroclimatic zone of west bengal	Prof. G. Saha
4.	SkSahabaz	Impact of diurnal variation of radiation on summer paddy over new alluvial zone of West Bengal	Prof. L. Das
5.	Sanku Barman	Implication of nanotechnology for enhancing rice (*Oryza sativa* L.) production in terai region of North Bengal	Prof. G. Saha
6.	Debolina Mondal	Estimation of inundation extent of potato-grown areas of Purba Bardhaman, West Bengal using optical and microwave remote sensing	Prof. M. K. Nanda
7.	Adrija Datta	Mapping of seasonal crop–fallow dynamics of Sundarban region using multidated Sentinel-2 imageries	Prof. M. K. Nanda
8.	Aloy Adak	Satellite based estimation of boro rice growing areas of Haringhata CD Block, Nadia District (West Bengal) using machine learning techniques	Prof. M. K. Nanda
9.	Jyoti Mondal	Predicting future irrigation water requirement for wheat under changed climatic scenario	Prof. S. Banerjee
10.	Mouli Bagchi	Predicting yield of wheat grown in Indo-Gangetic Basin using meteorological parameters and remotely sensed data	Prof. S. Banerjee
11.	Gourab Palit	Characterization and trend analysis of rainwater availability at different growth phases of rainfed Kharif rice using daily rainwater balance approach in red and laterite zone of West Bengal	Prof. A. Saha
12.	Anannya Roy	The assessment of climatic risk and temporal trend of rainfed crop potential in Alipurduar district of West Bengal	Prof. A. Saha
13.	Barsha Pattnaik	Calibration and validation of rice variety Swarna by DASSAT model	Dr. A. Mukherjee
		Department of Plant Pathology	
1.	Muntha Srikanth Yadav	Disease progression of spot blotch of wheat under different dates of sowing	Prof. S. Das
2.	Rabinath Murmu	Biology, epidemiology and management of target leaf spot of tomato caused by *corynespora cassiicola*	Prof. A. Basu

Sl. No.	Name of the student	Thesis title	Name of the chairman
3.	Milton Saha	Plant disease management by using probiotics	Prof. D. K. Mishra
4.	Payel Adhikary	Epidemiology and symptomatological variations of *pestalotiopsis* leaf spot and blight disease of cashewnut in western part of West Bengal	Prof. S. Dutta
5.	Sankalpita Saha	Studies on leaf blight disease of ekangi(*kaempferia galanga* l.) And its eco - friendly management	Prof. G.Mondal
6.	Yerakam Durga	Morphological characterization of different isolates of *rhizoctonia solani* from banded leaf and sheath blight (blsb) of maize and its management (in vitro)	Dr. S. Debnath
7.	Saswati Pradhan	Efficacy of native rhizobacteria against different phytopathogens	Prof. A. Chakraborty
8.	Nandita Chakraborty	Diseases of grapes with special reference to *isariopsis* and *alternaria* leaf spot and blight in lateritic zone of West Bengal	Prof. S. Dutta
9.	Rudradev Kundu	Studies on anthracnose disease of dragon fruit and its ecofriendly management	Prof. G.Mondal
10.	Poulomi Gangopadhyay	Studies on fungul diseases of fishtail, lucky bamboo and philodendron	Prof. B. N Panja
11.	Swagato Bhattacharyya	Studies on the incidence and detection of mymiv in West Bengal	Prof. Jayanta Tarafdar
12.	Debosmita Raut	Standardization of cultivation method of *schizophyllum commune* under West Bengal condition	Dr. R. Sharma
13.	Md Imtiazzaman	Exploration of yeast as bio -control agent against lentil fungal pathogens	Prof. D. K. Mishra
14.	Ayan Pramanik	Studies on fungal diseases of cymbidium, phalaenopsis and vanda	Prof. B.N.Panja
15.	Sourav Basu	Diseases of aonla(*emblica officinalis*) with special reference to anthracnose in West Bengal	Dr. S. K. RAY
		Department of Plant Physiology	
1.	Saikat Biswas	Effect of foliar spray with naa on photosynthesis, yield and yield parameters of lentil (*lens culinaris* medik.)	Dr. S. Mondal
2.	Ishita Samai	Studies on genotypic variation and physiology of tolerance to pre - harvest sprouting and hard - seededness in mungbean [*vigna radiata* (l.) Wilczek]	Prof. A. K. Pal
3.	Arif Raihan	Evaluation of the brassica genotypes on the basis of their yield, yield attributes and oil content	Dr. S. Mondal

Sl. No.	Name of the student	Thesis title	Name of the chairman
4.	Najfimul Sheikh	Studies on growth and yield of field pea and its response to foliar application of paclobutrazol	Dr. S. Mondal
5.	Gund Suraj Nivrutti	Physiological study on regrowth and seed yield in dual purpose oat (*avena sativa* l.)	Prof. A. K. Pal
		Department of Agricultural Economics	
1.	Soumyadeep Ghosh	An economic analysis of production and marketing of date palm jaggeries in nadia district of West Bengal	Prof. Md.H. Ali
2.	Nandita Roy	An economic study on tea cultivation in jalpaiguri district of West Bengal	Dr. G. Dey
3.	Sanapala Pradeep	An economic analysis of processing industries of cashew nut in palasa region of Andhra Pradesh	Prof. S. Mukhopadhyay
4.	Bhargab Nag	Problems and prospects of farmers' producer companies in hooghly district in West Bengal	Prof. A.K.Nandi
5.	Imran Sk	Socio - economic analysis of food security problems in bidi workers in murshidabad district of West Bengal	Prof. Md.H. Ali
6.	Adrita Dam	Analysis of trends in pulses and oilseeds production in eastern india over last decade	Dr. S. Chatterjee
		Department of Agricultural Extension	
1.	Venkata Ganesh Mayaluri	A study on effectiveness of rythubharosa scheme in guntur district of Andhra Pradesh	Dr. T.K.Mandal
2.	Sabbani Venugopal	Change analysis of urban life style during covid 19 pandemic: the socio ecological interoretation and impact	Prof. A. Biswas
3.	Ashok Kapuria	Eco - environmental impact of thermal power emission on operating agro - ecosystem and livelihood of the farmers in the district of east midnapore, West Bengal	Prof. S. K. Achariya
4.	Prashant	Socialization and marketing analysis of kinnow in Rajasthan	Prof. A. Biswas
5.	Subhadip Mondal	Diffusion pathway of a transferred technology in selected villages of West Bengal through social network analysis	Prof. D. Basu
6.	Shaikh Lal Mohammad	A comparion among mango varieties in malda district with reference to profitability and taste	Prof. S. Mondal
7.	Sadarpan Samanta	A comparative study among different potato varieties with reference to cost of cultivation and profit in hooghly district	Prof. S. Mondal

Sl. No.	Name of the student	Thesis title	Name of the chairman
8.	Soma Sarkar	Appraisal of government schemes facilitating the development of women in West Bengal	Prof. D. Basu
9.	Manojkumar N M	Entrepreneurial behaviour mango growers in kolar district of Karnataka	Dr. T.K.Mandal
10.	Sudipta Chandra	Happiness of farmers : the socio - ecological interpretation and strategy implications	Prof. S. K. Achariya
11.	J TamalAtab	Intervention of different government schemes promoting the livelihood of rural people	Prof. D. Basu
12.	Swagata Patra	Uncertainty and chaos in farming an interpretation on production , livelihood and income	Prof. A. Biswas
13.	Amit Mondal	Understanding the value chain based extension issues of potato and onion	Prof. D. Basu
14.	Smruti Ranjan Jena	Study on market linkages by farmer producer organisation(fpos) in Odisha	Dr. T.K.Mandal
15.	Rajnandan Bairagya	Productivity, income, livelihood and ecology : the resilience analysis in agro eco - system	Prof. S. K. Achariya
16.	Parban Baidya	Social ecology of arsenic contamination in groundwater; factors, perception and impact on life and livelihood	Prof. A. Biswas
17.	Salim Sahaji	Fish preference basirhat -1 block of north 24 parganas district with reference to profitablity and taste	Prof. S. Mondal
18.	Debpriya Basu	Conservation agriculture &stewardship : economy, ecology & sociology	Prof. S. K. Achariya
19.	Sandipan Das	A comparison of yield, cost of cultivation and profit between traditional and aromatic rice in habra -i block	Prof. S. Mondal
20.	Chandreyee Basu	Understanding the types of agricultural advisory services used by farmers of the villages under haringhata block	Prof. S. Mondal
21.	Farka Murmu	Impact of lockdown on tourism in jhilimili West Bengal	Prof. A. Biswas
22.	Saumyesh Acharya	Entrepreneurial behaviour of farmers in farmer producer organisations (fpo)	Dr. T.K.Mandal
23.	Tanmay Kundu	Entrepreneurial communication : the process, factors and impact in agricultural enterprises	Prof. S. K. Achariya

Sl. No.	Name of the student	Thesis title	Name of the chairman
		Department of Agricultural Statistics	
1.	Lakshmi Murmu	Time series modelling and forecasting of production & export pattern of onion cultivation in India	Dr. B.Bhattacharya
2.	Aishwarya. V	A statistical study on growth and future projection of horticultural crops in Karnataka	Dr. B.Bhattacharya
3.	Moumita Paul	A study on robustness of general efficiency balanced block designs against missing observations	Prof. A.Majumder
4.	Nikita Das	Studies on advantages of ancova model in agricultural field crops over anova model	Prof. A.Majumder
5.	Atish Kumar Mishra	Time series analysis of major crops of odisha for food and nutritional security	Prof. P.K.Sahu
		Department of Seed Science & Technology	
1.	Pallabi Mondal	Progression of lentil genotype through priming on seed and seedling traits	Prof. P. Chakraborti
2.	Md. Sahin Akhtar Mondal	Study on variability of seed and seedling traits in wheat genotypes	Prof. P. Chakraborti
3.	Ms. Mudhireddy Jaswanthi	Evaluation of indian mustard [*Brassica juncea* (L) czern and coss] genotypes for growth, yield and pattern of seed development	Prof. A. Dutta
4.	Eshita Kundu	Stimulatory effect of seed priming as pretreatment factors on germination and vigour of carrot (*Daucas carota* L.)	Dr. S.K. Bordolui
5.	Soham Mukherjee	Studies of growth, yield and pattern of seed development in horsegram [*Macrotyloma uniflorum* (lam.) Verdc.]	Prof. A. Dutta
		Department of Soil and Water Conservation	
1.	Joheb Hassan	Response of mustard to integrated nutrient management in the gangetic plains of West Bengal	Prof. R. Ray
2.	Joydeep Das	Studies on effect of jute agrotextile with irrigation management on groundnut production in an inseptisol of West Bengal	Prof. S.K. De
3.	Subhrajoti Tikadar	Study on the role of cultivation of cowpea for soil conservation	Prof. N. C. Das
4.	Debjyoti Mandal	Yield and water use efficiency of insian mustard under different irrigation scheduling	Prof. R. Ray

Sl. No.	Name of the student	Thesis title	Name of the chairman
		Department of Agricultural Entomology	
1.	Aliva Das	*In vitro* efficacy of botanicals against rugose spiraling whitefly, *Aleurodicus rugioperculatus* Martin	Dr.K.Roy
2.	Asmita Koley	Assessment of impact of chemical intervention on lepidopteran pests in groundnut (*Arachis hypogaea*) ecosystem	Prof. A. K. Mukhopadhyay
3.	Athira Shajin	Study of dipteran pests infesting chilli with special reference to pepper fruit fly, *Atherigona orientalis* (Schiner) (Muscidae, Diptera)	Prof. A. Pramanik
4.	Bibek Sing Sardar	Host reaction of some tomato germplasm lines against root-knot nematode, *Meloidogyne incognita*, and its organic management in nursery bed	Dr. S. Mondal (Ghosh)
5.	Debamitra Chatterjee	Study on tarsonemid mites (Acari: Tarsonemidae) from West Bengal, India	Prof. K. Karmakar
6.	Debangana Biswas	Life table studies on diamondback moth, *Plutella xylostella* L. (Lepidoptera: Yponomeutidae)	Dr. G. Chakraborty
7.	Debleena Layek	Study on biology of *Ferrisia virgata* (Pseudococcidae: Hemiptera)	Prof. A. K. Sahoo
8.	Imtiaj Ali	Bioefficacy of some new insecticides against lepidopteran pest of okra and their effects on natural enemies	Dr.A. Samanta
9.	Ipsita Ghosh	Studies on population dynamics and infestation rate of fruit flies on ash gourd	Dr. P.Debnath
10.	Marshal Joshi	Study on bioefficacy of insecticides for the management of sucking insect pests of brinjal	Dr.A.Samanta
11.	Naga Chaithanya Chakka	Study on biology of papaya mealy bug, *Paracoccus marginatus* Williams and Granara de Willink (Pseudococcidae; Hemiptera)	Prof. A.K.Sahoo
12.	Poulami Sarkar	Morphological studies of rice mealybug, *Brevennia rehi* (Lindinger) (Pseudococcidae: Hemiptera)	Prof. A.Pramanik
13.	Rajarshi Mandal	Population dynamics and management of sucking pests infesting okra [*Abelmoschus esculentus* (L.) Moench]	Dr. P. Debnath
14.	Rebika Khatun	Study on biodiversity of mite fauna associated with pulse crops with special reference to population dynamics and management of red spider mite (*Tetranychus* sp.) in black gram	Dr. S.C. Bala

Sl. No.	Name of the student	Thesis title	Name of the chairman
15.	Samanwita Ghosh	Biology and distribution of *Bemisia tabaci* (Genn.) (Aleyrodidae: Hemiptera) on brinjal	Prof. B.K.Das
16.	Sauradip Das	Insect pest of mango with special reference to sucking pest complex and their eco-friendly management	Dr. G. Chakraborty
17.	Snehal Mandip Das Mahuri	Effectiveness of different plant fractions as protectants against insect pests of stored green gram	Prof. S.Chakraborti
18.	Soumik Dey Roy	Assessment of impact of crop growth attributes and chemical interventions on arthropod complex in groundnut ecosystem	Prof. A. K. Mukhopadhyay
19.	Soumita Bera	Seasonal incidence of major insect pests infesting different pulse crops during winter season in Gangetic plains of West Bengal	Dr. A.Banerjee
20.	Subhankar Das	Study on tetranychid mites (Acari: Prostigmata) in association with crops and weeds in West Bengal	Prof. K.Karmakar
21.	Suneepa Chakraborty	Floral visitors of some oilseed crops and their foraging behaviour	Prof. S. Jha
22.	Susmita Kairy	Studies on incidence pattern and management of Epilachna beetle (*Henosepilachna vigintioctopunctata* Fab.) and leafhopper (*Amrasca biguttula biguttula* Ishida) infesting brinjal in the Gangetic basin of West Bengal	Dr. A.Sarkar
23.	Swagatika Bag	Effectiveness of different plant extracts as protectants against insect pests of stored pea (*Pisum sativum* var. *arvense* L.)	Prof. S.Chakraborti
24.	Tanaya Das	Biodiversity study of insect fauna associated with brinjal in the lower Gangetic plains of West Bengal	Dr. K.Roy

Faculty of Horticulture

Department of Vegetable Science

Sl. No.	Name of the student	Thesis title	Name of the chairman
1.	Puspita Das	Effect of intercropping on growth, yield and quality of tomato (*Solanum lycopersicum* L.)	Dr. P. Choudhuri
2.	Arijit Roy	Floral biology and pollination studies in faba bean (*Vicia faba* L.) Genotypes	Prof. M. K. Pandit
3.	Ranodip Majumder	Characterization of putative mutant lines of snake gourd in m5 and m6 generation	Prof. M. K. Pandit
4.	Arijit Paul	Genetic variability in garlic (*Allium sativum* L.) Genotypes for growth, yield, and yield attributing traits	Prof. U. Thapa
5.	Ajeet Kumar	Effect of straight and nano fertilizer on groth, yield and quality of cabbage (b. Oleracea var. Capitata l.)	Prof. S. B. Chattopadhyay
6.	Sourav Mollick	Effect of biostimulants on growth, yield and fruit quality of tomato	Dr. C. Karak
7.	Shreyasee Manta	Integrated effect of different sources on growth, yield and quality of tomato (*Solanum lycopersicum* L)	Dr. P. Choudhuri
8.	Archana Nahak	Evaluation of carrot hybrids in the indogangetic plains of west bengal	Prof. A. R. Mandal
9.	Subhrajyoti Sengupta	Assessment of relationship of weather prameters and production trend of important vegetables in west bengal	Prof. M. K. Pandit
10.	Jyotshna Sarkar	Effect of bio - inoculants on growth, yield, quality and disease incidence in frence bean (*Phaseolus vulgaris* L.)	Prof. A.Chattopadhyay
11.	Biplab Roy	Influence of organic supplements on growthh, yield and quality of onion (*allium cepa* l.)	Dr. C. Karak
12	Haobam Alice Devi	Effect of integrated nutrient management on growth , yield, quality of cabbage (*Brassica oleraceae* var. Capitala l.) And physicochemical prperties of soil in new alluvial zone of west bengal	Prof. S. B. Chattopadhyay
13.	Monami Sarkar	Effect of bio - inoculants on growth, yield, quality and disease incidence in cabbage (B*rassica oleracea* var. Capitata)	Prof. A.Chattopadhyay
14.	Arnab Kundu	Growth and yield of potato (*Solanum tuberosum* L.) As influenced by biostimulants under soilless culture system	Prof. U. Thapa

Sl. No.	Name of the student	Thesis title	Name of the chairman
		Department of Fruit Science	
1.	Sukanya Dutta	Studies on fruit characters of bael grown in new alluvial zone of west bengal	Prof. S. Kundu
2.	Debarati Pramanik	Phenological growth stages of rose apple (*Syzygium jambos*) in west bengal	Dr. D.Majhi
3.	Reetam Chaudhury	Studies on phenological growth stages of wax apple (*Syzygium samarangense*) in west bengal	Dr. D.Majhi
4.	Mohammed Hussain M	Effect of pre - harvest application of glycine betaine on frit quality and shelf life of banana var. Martaman	Dr. S. Debnath
5.	Jaykrishna Paul	Studies on flowering, fruiting and yield attributes of some mango cultivars	Prof. F. K. Bauri
6.	Madhumita De	Effect of growth regulator and antioxidant on fruit quality of litchi cv. Bombai grown in new alluvial zone of west bengal	Prof. P. Datta
7.	Shounak Nayak	Effect of chemicals and growth regulators on fruit quality of litchi cv. Bombai grown in new alluvial zone of west bengal	Prof. P. Datta
8.	Yengkhom Anandita Devi	Studies on the underutilized fruit crops grown in kakching district of manipur	Prof. S. Kundu
9.	Chinmoy Mandal	Effect of chemicals and growth regulators on flowering, yield and fruit quality of lemon	Prof. S. Kundu
		Department of Post Harvest Management	
1.	Tanu Roy	Standardization methodology and quality characterization of green chilli powder	Dr. P.K. Thakur
2.	Anindita Chakraborty	Studies on effect of blanching on drying of broccoli and cauliflower	Surajit Mitra
3.	Souvik Chakraborty	Studies on the quality evaluation of banana toffee	Ivi Chakraborty
		Department of Plantation, Spices, Medicinal and Aromatic Crops	
1.	Pratik Saha	Characterization of different genotypes of onion (*Allium cepa* l.)	Prof. AB.Sharangi
2.	Konathachira Sreeja	Effect of organic amendments on growth, yield and quality of ginger (*Zingiber officinale* rosc.)	Dr. D. K. Ghosh (l.k.n.)
3.	Mahendra Belagumpi	Effect of biostimulants on growth, yield and fruit quality of black cumin (*Nigella sativa* l.)	Dr. D. K. Ghosh (l.k.n.)
4.	Arshad Amir	Evaluation of red onion genotypes in the gangetic alluvial zone of West Bengal	Prof. AB.Sharangi

Sl. No.	Name of the student	Thesis title	Name of the chairman
5.	Dhananjoy Mudi	Comparative studies on the performance of coriander (*Coriandrum sativuml*.) Germplasms under gangetic alluvial plains of West Bengal	Prof. A.Pariari
6.	Soumik Samanta	Impact of biostimulants on growth, yield and quality of onion cv. Sukhsagar	Prof. N. Chattopadhyay
7.	Nilanjana Maity	Nutrient management of aloe vera (*Aloebar badensis*) under new alluvial zone of West Bengal	Prof. N. Chattopadhyay
Department of Floriculture and Landscape Architecture			
1.	Masangari Supriya	Understanding the water relations and stem bending characteristics in cut gerbera (*gerbera jamesonii* bolus) cvs stanza and rosalin	Dr. T.K. Chowdhuri
2.	Mahasina Ahmed	Effect of seaweed on growth and flowering of pompon dahlia	Prof. A.K. Pal
3.	Somava Mandal	Effect of different micronutrients on growth and flowering of china aster (*callistephus chinensis*)	Prof. T. Mandal
4.	Saon Mondal	Effect of integrated nutrient management on *pompon dahlia* cv. Dastonebicolour	Prof. M. Mitra (Sarkar)
5.	Sumohan Barman	Effect of silica oxide on growth and development of tuberose	Dr. T.K. Chowdhuri
6.	Praveen Naik K. T.	Studies on floral morphology, pollination and seed setting behaviour of hibiscus	Dr. J. Majumder (Sarkar)

Faculty of Agricultural Engineering

Sl. No.	Name of the student	Thesis title	Name of the chairman
Department of Farm Machinery and Power			
1.	SondipSasmal	Effects of different tillage operation on soil physical properties	Prof. S.Karmakar
2.	Moinuddin Sk	Development and testing of a power weeder for field crops	Prof. P. S. Chattopadhyay
3.	Pijush Mondal	Testing and development of tractor operated potato digger	Prof. P. S. Chattopadhyay
4.	Pappu Majhi	Design and development of manually operated weeder	Prof. D. Saha
5.	Sanjay Mochary	Design and development of manually operated weeder for horticultural crops	Prof. D.Saha
6.	Sumir Mandal	Performance evaluation of multi crop planter	Prof. S. Karmakar

Sl. No.	Name of the student	Thesis title	Name of the chairman
7.	Kajol Behura	Study of happy seeder on crop residue management	Prof. S.Karmakar
8.	Janga Bala Gurivi Reddy	Study of tillage tools in instrumented soil bin machinery system	Prof. S.Karmakar
9.	Arijeet Jana	Studies on rotavator based tillage systems to compare its performance with conventional tillage practices	Prof. P. S. Chattopadhyay
10.	Kabi Sankar Mahata	Development and testing of a self-propelled type rotary forage Harvester	Prof. P. S. Chattopadhyay
		Department of Food Engineering	
1.	Rubia Khatun	Estimation of pressure drop in the refrigeration system of a commercial cold storage	Prof. M.K.Chourasia
2.	Panchatapa Mahanta	Study of quality attributes of the microwave-dried beetroot chips	Prof.P.K.Sahoo
3.	Priyanka Ray	Study of drying kinetics during heat pump drying of capsicum	Prof.P.K.Sahoo
4.	Samikshya Dash	Optimization of refrigeration load of a multipurpose cold storage	Prof. M.K.Chourasia
5.	Sourav Santra	Thermodynamic modeling of a double-effect lithium bromide–water based vapor absorption refrigeration system	Prof.P.K.Sahoo
6.	Ginnat Sultana	Study of drying kinetics and quality attributes of tray-dried spiny gourd	Prof.P.K.Sahoo
7.	Majahar Ali	Performance analysis of a heat pump dryer for drying of guava	Prof.P.K.Sahoo
8.	Nimai Das Bairagya	Performance evaluation of plane pipe, finned pipe, and air-cooling unit type evaporators for potato cold storage	Prof. M.K.Chourasia
		Department of Post Harvest Engineering	
1.	Gattu Sriharika	Drying characteristics of tomatoes using tray drying and intermittent microwave drying	Dr. A.Karmakar
2.	Vaidehi Verma	Drying characteristics and quality parameter of carrot slices using microwave drying	Dr.A. Karmakar
3.	Sourav Karjee	Microwave pre - treated hot air drying of green bellpepper	Prof. Souti Mukherjee
4.	Hasanur Hoque Shaeb	Drying studies on ridge gourd under intermittent condition	Prof. Souti Mukherjee
5.	Sanjoy Das	Osmotic dehydration of armenian cucumber	Prof. Souti Mukherjee

Sl. No.	Name of the student	Thesis title	Name of the chairman
6.	Dipankar Routh	Study on osmo - convective dehydration of mango	Dr. A.Karmakar
7.	Nabanita Saha	A capacitive sensor based approach for determination of freshness index of food materials	Dr. B. Chakraborty
8.	Amit Mahata	A machine learning based approach for classification and identification of potato	Dr. B. Chakraborty
9.	Kumar Dhruv	Study on osmo - convective dehydration of carrot	Dr. A.Karmakar
10.	Manas Pramanik	Studies on preparation of drumstick seed powder and it's quality assessment	Dr. B. Chakraborty
11.	Santunu Das	Preparation and quality assesment of dragon fruit *(hylocereus* sp.) Powder	Dr. B. Chakraborty
		Department of Soil and Water Engineering	
1.	Era Raju	Yield response of okra under drip irrigation by mulch and no mulch condition	Dr. A. Chowdhury
2.	Swapnajit Chowdhury	Determination of morphometric parameters and assessment of decadal changes in land use land cover of West Bengal trioura district using remote sensing and open - source gis tool	Dr. A. Chowdhury

List of Ph. D. Thesis Submitted at BCKV 2022

Faculty of Agriculture

Sl. No.	Name of the student	Thesis title	Name of the chairman
		Department of Agronomy	
1.	Saikat Biswas	Response of rabi maize (*Zea mays* L.) to irrigation and fertilizer levels in Gangetic plains of West Bengal and its simulation through CERES-Maize model	Prof. D Dutta
2.	Ramyajit Mondal	Effect of seed priming and follar nutrition on growth and yield of lentil (*Lens culinaris* Medik)	Dr K Jana
3.	Saju Adhikary	Effect of seed priming with nano zinc and selenium on germination, seedling growth and yield of direct seeded rice (*Oryza sativa*L.)	Dr B Bisaws
4.	Kasturi Ghosh	Fine: Tuning package of practices for vetiver with special reference to soil and water conservation	Prof. Koushik Brahmachari
5.	V. Visha Kumari	Effect of foliar spray of Fe, Zn and B in mitigating terminal heat and moisture stress in Lentil (*Lens culinaris* Medik)	Prof. Rajib Nath
6.	Mousumi Mondal	Influence of establishment method, irrigation and seed bed management on growth, yield and water productivity of summer rice (*Oryza sativa* L.)	Dr. B Biswas
7.	Urjashi Bhattacharya	Management of rice followed by lentil as influenced by conservation tillage and different doses of nutrients	Dr. Smritikana Sarkar
8.	Utpal Biswas	Comparative studies on effect of tillage and weed management on maize- greengram cropping sequence	Prof. Champak Kumar Kundu
9.	Sourav Garai	Growth ,yield and nutrient use efficiency ofrabi maize (*Zea mays* L.) hybrids as influenced by crop establishment methods and neem coated urea	Dr. H. Banerjee
10.	Poulomi Nandy	Effect of integrated nutrient management triggered by nano zinc in rice–lentil crop sequence in Inceptisol	Dr. S. K. Das
11.	Ankita Begam	Studies on nutrient management for kharif maize + cowpea intercropping system	Prof. M. Pramanick
12.	MD Hasim Reja	Effect of molybdenum, iron, and nitrogen on growth and productivity of relay lentil (*Lens culinaris* Medik.) in new alluvial zone of West Bengal	Prof. Rajib Nath

Sl. No.	Name of the student	Thesis title	Name of the chairman
13.	Ajoy Das	Investigation for nutrient and plant protection in organic rice	Prof. M. Pramanick
14.	Milan Kanti Kundu	Effect of date of planting and plant growth regulators on germination, yield, and quality of sugarcane in new alluvial zone of West Bengal	Prof. B. C. Patra
15.	Saumi Goswami	Isolation of *Rhizobium* from lentil-growing areas of West Bengal and its influence on growth and yield of lentil (*Lens culinaris* Medik.)	Prof. S. K. Gunri
16.	Dibyendu Mondal	Weed dynamics and management studies under conservation tillage in potato after transplanted winter rice in the lower genetic plains	Prof. P. Bandopadhyay
17.	Sahely Kanthal	Performance of rice-wheat-green gram and rice-lentil-fallow cropping systems under conservation agriculture	Dr. B. Biswas
		Department of Agricultural Biotechnology	
1.	Monoj Sutradhar	Agrobacterium- mediated transformation of Indica rice varieties popularly grown in West Bengal	Dr. N. Mandal
2.	Monish Mitra	In vitro direct regeneration and *Agrobacterium* rhizogenes-mediated hairy root culture for enhanced forskolin production in Indian colius (*Coliusforakolii* Briq.)	Dr. N. Mandal
3.	Suparna Das	Morphological and molecular assessment of Indian cashew (*Anacardium occidentale* L.) germplasm grown under West Bengal	Dr. Md. N. Ali
		Department of Agricultural Chemicals	
1.	Shuvajit Dutta	Chemistry and residual fate of halauxifen-methyl and fluroxypyr-ethyl in wheat plant, soil, and water	Dr. S. Roy
		Department of Agriculture Chemistry and Soil Science	
1.	Ramprosad Nandi	Mitigating abiotic stresses through tillage, potassium fertilizer and sowing tim management in lentil	Prof. P.K. Bandyopadhyay
2.	Biswabara Sahu	Carbon in soils under Conservation Agriculture	Prof. Biswapati Mandal
3.	Shreya Das	Influence of inorganic amendments on phytoavailable cadmium content in contaminated soils and its concentration in plants	Prof. P. K. Patra

Sl. No.	Name of the student	Thesis title	Name of the chairman
4.	Samanyita Mohanty	Assessing soil quality indicators and organic carbon fractions in rice based cropping systems under inorganic and organic fertilization	Dr. Sushanta Saha
5.	Ahana Dey	Zinc availability in soils and its nutrition of crops grown under conservations agricultural practices	Dr. Sidhu Murmu
6.	Nitin Chatterjee	Evaluation of fluoride toxicity in soil, water and plant in different districts of West Bengal and its remediation	Prof. G.C. Hazra
7.	Alika N. Zhimo	Grading of plant-available potassium using exhaustive cropping techniques combined with chemical analysis of soils	Prof S. K. Pal
8.	Swarbinay Mahanta	Impact of micro-environment on arsenic dynamics of rice (*Oryza sativa* L.) ecosystem	Prof. P. K. Patra
9.	Animesh Ghosh Bag	Delineation of arsenic in some areas of West Bengal and alleviating its loading in Rice	Prof. G.C. Hazra
10.	Paramita Deb	Potassium fractions in soil under long term experiments with different management practices and soil types	Dr. Sidhu Murmu
11.	Priyanka Ghatak	Impact of long-term fertilization on soil physical properties	Prof. p. K. Bandyopadhyay
12.	Pravat Utpal Acharjee	From waste of asset: use of yellow gypsum as a source of sulphur in agriculture	Prof. P.K. Patra
13.	Kiran Pilli	Use of yellow gypsum as an amendment for mitigating arsenic accumulation in groundnut and rice	Prof. P.K. Patra
14.	Subham Mukherjee	Water use pattern of chickpea (*Cicer ariethinum* L.) under phosphorus, irrigation and tillage management	Prof. P.K. Bandyopadhyay
15.	Siddhartha Mukherjee	Nitrogen availability in soils and its nutrition of crops grown under conservation agriculture	Dr. Dibyendu Sarkar
16.	Piu Basak	Development of boron management protocol for improving productivity and quality of cauliflower	Dr. Dibyendu Sarkar
17.	Sudipa Mal	Development of boron management protocol for improving productivity and quality of tomato	Dr. Dibyendu Sarkar
18.	Anupam Das	Modeling Carbon storage in Soils Under long term experiments	Dr. Biswapati Mandal (Retd.)
19.	Jaison M.	Phosphorus availability in soils and its nutrition of crops grown under conservation Agricultural practices	Dr. Biswapati Mandal, Professor

Sl. No.	Name of the student	Thesis title	Name of the chairman
20.	Ruby Patel	Stoichiometry of C, N, P, and S in Soils under Long-term Experiments	Dr. B. Mandal (Retired)
21.	Sudip Sengupta	Enrichment of vermicompost for arsenic mitigation in soil-plant system	Prof. K. Bhattachrayya
22.	Puja Singh	Exploration of key microbial groups in soil under conservation agricultural practices	Dr. N. Saha
		Department of Agricultural Entomology	
1.	Arpana Manger	Population dynamics of major insect pests in brinjal vis-à-vis varietal evolution and insecticidal management agents brinjal shoot and fruit borer; Leucinodesorbonalis (Guenee) under West Bengal condition	Dr A Samanta
2.	Gautam Kunal	Stingless bees: studies on palynology and pollination efficiency in pumpkin (*Cucurbita pepo* Linnaeus)	Prof S Jha
3.	Debashis Roy	Plant resistance of some rice landraces against brown planthopper, *Nilaparvata lugens* (Stal.) and its sustainable management through ITK in combination of some new pesticides molecules	Dr G Chakraborty
4.	Jayita Hore	Biodiversity study of the insect fauna associated with banana and development of biointensive module for managing stem weevil (*Odoiporus longicollis* Oliver)	Dr K Roy
5.	Anamika Kar	Taxonomic description and illustration of phytoseiid mites (Acari: Mesostigmata) from West Begal Northeastern states of India	Dr K Karmakar
6.	Amit Kumar Das	Influence of edaphic factors on the occurrence of soil dwelling nematode population under diverse ecosystems	Prof A K Mukhopadhyay
7.	Arka Samanta	Studies of diversity of entomopathogenic nematodes in various agro climatic zone of West Bengal and their pathogenicity against some insect pest of agricultural importance	Prof. A Pramanik
8.	C. Selvaraj	Bio- ecology, varietal evaluation and Eco-friendly Insect Pest management in Pigen pea (*Cajanuscajan* L. Millsp) with some Plant derived Bio- pesticides.	Dr. A. Samanta
9.	Shamik Dey	Assessing biodiversity of arthropods and taxonomy of oribatid mites (Acari:Oribatida) under conservation agricultural practices.	Prof. K. Karmakar
10.	Arpita Baidya	Study on Seasonal occurrence and population dynamics of pests of brinjal in organic, IPM and Farmers cultivation practices under Gangetic alluvial zone of West Bengal	Prof. K. Karmakar

Sl. No.	Name of the student	Thesis title	Name of the chairman
		Department of Agricultural Extension	
1.	Pratick Mondal	Consumers' decision making process in purchasing cereals	Prof. D Basu
2.	Anwesha Mandal	Social ecology of conservation agriculture in terms of water-nutrient-carbon management: the analysis and interpretation	Prof S K Acharya
3.	Riti Chatterjee	The estimation of ecological services in terms of energy, climate and knowledge management: the dynamics of social-ecology of conservation agriculture	Prof. A. Biswas
4.	Sabyasachi Karak	An analysis of the impact of Nadia Krishi Vigyan Kendra (KVK) on the livelihood of farmers	Dr. T K Mandal
5.	Telem Matouleibi Chanu	Impact assessment of tribal sub-plan (TSP) in the selected districts of Manipur	Prof. S Mondal
		Department of Agricultural Statistics	
1.	Dinesh Kumar P	Study on water quality data of the river Ganga flowing through agricultural watershed in Nadia, West Bengal	Prof A Majumder
2.	Tufleuddin Biswas	Application of multiple criteria decision making (MCDM) approach for assessment of conservation agriculture practices with rice based cropping systems	Prof A Majumder
3.	Sujatha K	Statistical modeling and forecasting of major oilseeds production in India	Prof. B Bhattacharya
4.	Parvez Mallick	Construction of optimal balanced and nearly balanced super saturated design	Prof. A Majumder
		Department of Agricultural Meteorology and Physics	
1.	Sarath Chandran M. A.	Identification of sustainable cropping sequences under projected climate of new alluvial zone of West Bengal using crop simulation modeling	Prof. S Banerjee
2.	Argha Ghosh	Study of water resources vis-avis cropping systems of Gosaba Block of Indian Sundarban using satellite and co-lateral in-situ observations	Prof. M K Nanda
		Department of Animal Science	
1.	Partha Sarathi Chakraborty	The productive and morphometric traits influencing variation in prolificacy in black Bengal goat	Prof. C K Biswas

Sl. No.	Name of the student	Thesis title	Name of the chairman
		Department of Genetics and Plant Breeding	
1.	Sudhir Kumar	Allelic status of spot blotch resistance QTLs and their resistance potential in a set of wheat (*Triticum aestivum* L.) genotypes	Prof. S Mukherjee
2.	Himanshu Sekhar Garg	Studies on gene action for drought tolerance attributes in rice (*Oryza sativa* L.)	Prof. C Bhattacharyya
3.	Soham Hazra	Applied mutagenesis to isolate putative mutants processing spineless and YVMV resistant characters in Okra (*Abemoschus esculentus* L.)	Prof. A Majhi
4.	Shampa Purkaystha	Development and validation of allele specific makers for some yield enhancing genes in rice	Prof. P K Bhattacharyya
		Department of Plant Pathology	
1.	Rakesh Patsa	Survey, surveillence and management of major diseases of cashewnut of West Bengal	Dr. S Jash
2.	Pradip sarkar	Characterization, epidemiology and management of Chrysanthemum (*Chrysanthemum morifolium*) diseases in the Gangetic plains of West Bengal	Prof B.N. Panja
3.	Sanju Tamang	Host pathogen interacting and epidemiology of *Sclerotium rolfsii Sacc*. Associated with collar rot of chickpea in Indo Gangetic Plains of West Bengal	Dr. Poly Saha
4.	Desh Raj Shri Bharati	Characterization and exploitation of salt tolerant *Trichoderma* spp. For plant growth promotion and management of diseases of French bean (*Phaseolus vulgaris*) under coastal saline region of West Bengal	Prof. S Dutta
5.	Vanalalhruaia	Southern leaf blight of maize: its epidemiology and integrated management	Dr. Sunita Mahapatra
6.	Mudidana Divya	Studies on abiotic induced resistance against alternaria blight of mustard	Prof. Srikanta Das
7.	Tanusree Das	Plant growth promotion and disease management of Lentil (*Lens culinaris* L.) by native rhizobacterial candidates	Dr. S Mahapatra
8.	Tushnima Chaudhuri	Evaluation of nanoparticles and inducer molecules for eco-friendly management of diseases of *Solanaceous* vegetable crops.	Prof. A Basu
9.	Sukram Thapa	False smut of rice: its epidemiology and management	Dr. K.K. Sarkar
10.	Ankita Biswas	Effect of crop canopy architecture on important foliar fungal disease dynamics of groundnut (*Arachis hypogea*. L)	Prof. S. Das

Sl. No.	Name of the student	Thesis title	Name of the chairman
11.	Yashi Umbrey	Studies on seed borne mycoflora of rice (*Oryza sativa* L.) and its eco-friendly management	Prof. S. Das
12.	Gouranga Datta	Variability, epidemiology and management of *Sclerotium rolfsii* under gangetic Alluvial Region of West Bengal	Prof. S Dutta
13.	Katakam Mounika	Dieasespectrum of selected ornamental plants with emphasis on epidemiology management and diversity of anthracnose of Cornstalk	Prof. B N Panja
14.	Imtinungsang Jamir	Diversity of *Ralstonia solanacearum* causing bacterial wilt of brinjal and its management through grafting	Dr. A K Mandal
		Department of Seed Science and Technology	
1.	Aninda Chakraborty	Pre-sowing seed priming with ag-nanoparticle in green gram: chemo-morphic changes during seed development and response pattern for seed production	Dr. S K Bordolui
2.	Rajkumari Bony Devi	Variation in seed development and seed quality parameters of mustard (*Canola* type) as influenced by nutrient management	Prof. A Dutta
3.	Rupa Das	Response of rapeseed and mustard genotypes towards seed priming for quality seed production	Prof. A Dutta
		Department of Soil and Water Conservation	
1.	Rodrick Lepcha	Irrigation and nutrient management on large cardamom (*Amomum subulatum*roxb.) in Derjeeling hills terrain in West Bengal	Prof. R Ray
2.	Sri Bishwash Rai	Studies on the effect of inter cropping sequences in mango or orchard in new alluvial zone of West Bengal	Prof. P K Dhara
3.	P.A. Ramsem	Impact of cowdung based liquid manure of soil health and crop productivity under agroforestry system in new alluvial zone of West Bengal	Prof. N C Das

Faculty of Horticulture

Sl. No.	Name of the student	Thesis title	Name of the chairman
Department of Floriculture and Landscape Architecture			
1.	Kommu Pavan Kumar	Morphological characterization and storage of tubers of different genotypes of dahlia	Dr T K Choudhuri
Department of Fruit Science			
1.	Tamanna Perween	Studies on the phenology of dragon fruit in different growing season	Prof K K Mandal
2.	Shuvadeep Halder	Morphological, biochemical and molecular characterization of "off season" mango in West Bengal	Prof. Md. A Hasan
3.	Soustav Dutta	Integrated nutrient management for maintaining soil health and sustainable production of *aonla* in Red and Laterite Zone of West Bengal	Prof. K.K. Mandal
4.	KhwairakpamPremlata Devi	Studies on reproductive biology of dragon fruit species (*Hylocereus undatus*and *Hylocereus costaricensis*)	Prof. Md. Abu Hasan
Department of Floriculture and Landscaping			
1.	Priyaranjan Koley	Effect in induced mutagenesis in Tuberose (*Polianthes tuberose* L.) for developing novel variants.	Prof. S S Gantait
Department of Fruits and Orchard Management			
1.	Abhisikta Khan	Effect of drift irrigation, mulching and antitranspirant on water use and productivity of tissue culture banana cv. Grand Naine	Dr. S khan
2.	Sudipta Sannigrahi	Productivity improvement in pomegranate through intervention of flowering dynamics and reproductive system under semi-arid region of South-Bengal	Prof. S K Sarkar
Department of Plantation, Spices, Medicinal and Aromatic Crops			
1.	VAMSHI Krishna Suddala	Influnce of metabolite elicitors on growth, yield and quality of turmeric (*Curcuma longa* L.)	Prof. J K.Hore
2.	Aloke Bar	Coconut based croppingsystem with tuber and spice crops and nutrient management of ginger under this system	Dr. D K Ghosh
3.	Pavan Gowa M.	Bio- formulation and clicitors mediated response of growth, yield and quality of kalmegh *(Andrographis paniculata* Wall, Ex Nees)	Prof. A B Sharangi

Sl. No.	Name of the student	Thesis title	Name of the chairman
		Department of Vegetable Science	
1.	Tithi Dutta	Influence of grafting on yield, fruit quality and tolerance to biotic stresses in tomato (*Solanum lycopersicum* L.)	Prof . S B Chattopadhyay
2.	Anamika Upadhyay	Characterization of onion genotypes with special emphasis on purplr blotch disease (*Alternaria porri*) using molecular markers	Prof. T K Maity
3.	Pinkey Dukpa	Assessmet of Growth Dynamic and Fruit Yield of Capsicum Under Organic Culture	Prof. U Thapa
4.	Sourav Roy	Genetic, variation, character association and gene action in okra	Dr. C. Karak
5.	B. Lalramhlimi	Genetic behaviour of bacterial wilt disease in tomato (*Solanum lycopersicum* L.) under different biovars of Eastern India	Prof. S B Chattopadhyay
6.	Subrajyoti Chatterjee	Yield components, nodulation and gene action in French bean (*Phaseolus vulgaris* L.)	Dr. S Mondal
7.	Subradeep Pramanik	Assessment for fruit fly tolerance in putative mutant lines of snake ground (*Trichosanthes angunia* L.) in M2 generation and their further evaluation in advanced generations for yield and quality.	Prof. M K Pandit
8.	Bapi Das	Characterixzation, genetic, variability, cytology and charater association of baby – potato genotypes of North -eastern region.	Prof. P Hazra
9.	Pradipta Dutta	Genetic variability, character, association genetic diversity and gene action in snap melon	Prof. P Hazra
10.	Debmala Mukherjee	Gene action for different characters involving cherry and purple tomato genotypes	Prof. U Thapa

Publication Summary

Research papers with NAAS Score during 2022-23					Total
> 10	**7.5-10**	**5-7.5**	**< 5**	**Non NAAS rated Peer reviewed journals**	
36	70	193	29	23	351
Book	Book chapter	Technical bulletin/ Manual/Report			
19	106	30			155

Research Articles

NAAS Score: >10

1. Alam, M., Bano, N., Ahmad, T., Sharangi, A.B., Upadhyay, T.K., Alraey, Y., Alabdallah, N.M., Saeed, M. and Rauf, A. (2022). Synergistic role of plant extract and essential oil against multi-drug resistance and gram-negative bacterial strain producing extended-spectrum β-lactamases. *Antibiotics*, **11**(7): 855.
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2. Biswas S., Moinuddin, G., Jash, S. Kundu, R. and Sarkar A (2022) "Krishi byabosthay abohayoya poribortoner provab o tar somadhan" [in Bengali], Regional Research Station, BCKV, Jhargram

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4. Chakrabarty, S. (2022). Magic of Marigold. Floriculture Today, September:42-44

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6. Ghosh, M. (2022) Paschimbange Dhan Chas: Atit Theke Bartaman, Part II (in Bengali), Saar Samachar, Vol. 60, No. 4, pp. 23-30.

7. Ghosh, M., Banerjee, S., Biswas, T., Sakar, T., Das, S., Ghosh, S., Bag, A., Biswas, P., Gorain, J. and Pati, S. (2022). Dhan Jamite Nitrogen-ghatito Chapan Saar Prayog: Leaf Colour Charter Gurutwo o Byabahar (in Bengali), Saar Samachar, Vol. 60, No. 2, pp. 37-40.

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12. Karak, S., Thapa, U. and Das, N. (2022) "Effect of Climate Change in Food Security" published by Society for Advancement in Agriculture, Horticulture and Allied Sectors (SAAHAS) : e- Newsletter , Krishi Udyan Darpan , Volume 2 issue 2.; pp 9-13

13. Mahapatra, S and Mukherjee, D. (2022). Gomer rog: sonaktakoronabongpriticar, Published by, All India Co-ordinated Research Project on Wheat and Barley, Kalyani, Nadia, W.B.

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21. Karak S. and Thapa, U. (2022) *Ek Nojore Krishi Jontropati o Tar Babohar*. Director of Extension Education, Directorate of Extension Education, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, West Bengal.
22. Kundu, S., Thapa, U., Jana, K., Hansda, N.N. and Karak, S. (2022) *Green House e Adhunik Paddhotite f Sosha Chas*. Director of Extension Education, Directorate of Extension Education, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, West Bengal.
23. Mahabub, A. and Thapa, U. (2022) *Production Technology of Guava*. Director of Extension Education, Directorate of Extension Education, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, West Bengal.
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26. Datta, S. (2022). Modern method of compost production" (in Bengali), published by RRS, New Alluvial Zone, Bidhan Chandra Krishi Viswavidyalaya, Gayespur, Nadia, West Bengal.
27. Debnath S. and Biswas S. Fall Army Worm – Er Chinhitokoron O Byabosthapona. AICRP on Maize, Bidhan Chandra Krishi Viswavidyalaya, West Bengal (Bengali translation of ICAR leaflet).
28. Biswas S. and Debnath S.“UnnotoProthay Baby Corn Chas”. AICRP on Maize, Bidhan Chandra Krishi Viswavidyalaya, West Bengal.

Report

1. Bera, Soumen; Patel, LC; Saha, S; Maji, S; Chatterjee, S, Ghosh, DK; and Mukherjee, A (Eds.).2022. *Comprehensive District Agriculture Plan, Purba Bardhaman*. A report Submitted to the District Magistrate, Purba Bardhaman, pp.1-256
2. Das, Sibsankar; Saha, Poly; Datta, Jhuma; Moinuddin, Golam; Chattopadhyay, Soumitra; Bauri, Fatik; De, Susanta Kumar and Hore, Jitesh (Eds.). (2022). *Comprehensive District Agriculture Plan, Paschim Bardhaman.* A report submitted to the District Magistrate and District Collector, Paschim Bardhaman, pp. 1-303.

AWARDS/ HONOUR/ RECOGNITION

A. Faculties

1. Prof. Sankar Kumar Acharya received the Distinguished Professor and Academician Award (RES, 2022), Diamond Achievers Award (CAPA, 2022), and Best Paper Awards for publications presented at the International Conference on Green Technology and Agriculture, Centurion University (July 16–17, 2022).
2. Prof. Pranab Hazra received the Dr. Kirti Singh Memorial Life Time Achievement Award from the Indian Society of Vegetable Science for his contributions to vegetable science research and development. He also served as a member of the Task Force Committee for developing DUS guidelines for cucurbits under PPV & FRA, Ministry of Agriculture and Farmers' Welfare, Government of India.
3. Prof. Jayanta Tarafdar was honored as a Fellow of the Indian Virological Society (IVS) 2022. He was appointed as an Expert and Advisor Examiner for the West Bengal Civil Service (Executive) Examination in Agriculture by the Public Service Commission, Government of West Bengal. He serves as an External Member of the DBT-nominated Institutional Biosafety Committee at Ramakrishna Mission Vivekananda Centenary College, Rahara, and as a Vice Chancellor-nominated External Expert for the Departmental Research Committee of the Botany Department at the University of Kalyani. Additionally, he is a Vice Chancellor nominee for the Selection Committee of Professors in Botany, Microbiology, and Biotechnology at the same university, edits the Virology section of the Indian Phytopathology Journal (Springer), and acts as an External Examiner for institutions including Assam Agricultural University, Central Agricultural University (Umium and Imphal), IARI, and Delhi University (South Campus).
4. Prof. S.K. Ghosh was conferred the International Scientist Award for Excellence Service by VDGOOD in 2022 and the VigyanRatnaSamman by Jabalpur Management Association during a conference at Rani Durgawati University (March 25-27, 2022). He delivered a keynote lecture at an international conference on AatmNirbhar Bharat and was an invited speaker at a national symposium on ornamental and edible horticulture at BCKV (February 21-22, 2022).
5. Prof. Umesh Thapa received the Eminent Professor Award 2022 from IMRF. He attended the XIIth Group Meeting of AINRP on Onion and Garlic, delivered lead lectures on high-tech horticulture and hydroponic farming, and was a guest of honor at Sri Ramkrishna Ashram's agricultural exhibition. He also served as an external examiner for M.Sc. thesis viva-voce at OUAT Bhubaneswar, ITM University, and BAU Sabour.

6. Prof. Krishna Karmakar received the Dr. H. Nagaraja Memorial Award for outstanding contributions to insect systematics, including mites and spiders, from ICAR-NBAIR & Society for Biocontrol Advancement, Bengaluru, in December 2022.
7. Prof. Lalu Das was awarded the Outstanding International Scientist Award 2022 (INSO) on Agrometeorology and Climate Change by VDGOOD Professional Association.
8. Prof. Arup Chattopadhyay was a recipient of the International Research Awards on Science, Health, and Engineering (SHEN2022) in 2022, recognized for his innovative research contributions.
9. Prof. Saon Banerjee was elected as a Fellow of the Association of Agro-meteorologists 2022.
10. Prof. Dhiman Mukherjee received the Excellence Service Award in 2022 from the International Research Awards on Science, Technology, and Management (INSO) in Chennai, recognizing his outstanding contributions. He also served as a member of the Zonal Monitoring Team for the Wheat and Barley Unit in Karnal during 2021-22, aiding in agricultural research and monitoring.
11. Dr. Lakshman Chandra Patel received Outstanding Teacher Award and the Best Oral Presentation Award at the Biotic Science Congress (Aug 8–9, 2022, Tripura) and the FSBER Fellow Award 2022 from the Society for Biotic and Environmental Research.
12. Dr. Kalyan Jana received multiple accolades in 2022, including the Best Citizens of India Award from The International Publishing House, the Outstanding Scientist Award from INSO Awards by VDGOOD Professional Association, the Golden Achievers Award from CAPA, New Delhi, and the Dr. A.P.J. Abdul KalamRastriyaPuraskar from Glacier Journal Research Foundation. He was also awarded a Certificate of Appreciation for his contribution to nutrient management in dual-purpose oat under AICRP on FC & U at BCKV, Kalyani, and recognized for outstanding outreach programs in 2022 by IGFRI and ICAR.
13. Dr. Sanjay Bairagi received the Young Scientist Award from the Society for World Environment, Food and Technology (Oct 16, 2022) and was appointed BOS member, Department of Vegetable Science, BCKV.
14. Dr. Ratneswar Poddar was selected for the Young Scientist Award 2022 by the Crop and Weed Science Society, acknowledging his promising contributions to agricultural research.
15. Dr. Kanu Murmu was awarded the Innovative Teacher Award in Agronomy in 2022 by the International Multidisciplinary Research Foundation (IMRF), an NGO registered with NITI Aayog, headquartered in Vijayawada, India, for her innovative contributions to agricultural education.

16. Dr. Raghunath Mandal is the recipient of NetajiSubhas ICAR International Fellow at Royal Holloway University of London (2019-2022), contributing to international agricultural research.He also acted as a Lead Speaker and was nominated as a Board of Studies or Council member.
17. Prof. S. Bhattacharyya is a member of the Project Evaluation Committee for Biological Science and Biotechnology at WBDST&BT, a Research Advisory Committee member at Central Sericulture Research and Training Institute, Berhampore, and the National Tea Research Foundation, Kolkata. He is the convenor of the Fellow Selection Committee at the West Bengal Academy of Science and Technology, a member of the Best Scientist Award committee at CRIJAF, and an external expert for faculty recruitment at RKMVERI, Narendrapur. He also serves on the Board of Research Studies/Academic Council for Agricultural Biotechnology at RKMVERI and Botany at WBSU.
18. Prof. S.B. Goswami of Agronomy Department was entrusted with the position of Dean F/Ag. Prof. Goswami also guided in developing the Vocational Courses in Agriculture Discipline of WBSCT&VE&SD.
19. Prof. Suhrita Chakrabarty Acted as Chairman of the Expert Committee on Agriculture under the Department of Higher Education, Science & Technology and Biotechnology (DHESTBT), Govt. of West Bengal from 2017 to 2023.
20. Prof. Amit Baran Sharangi delivered an invited lecture as a Lead Speaker and Co-Chairman at a National Seminar on Indian Spices at Uttar Banga Krishi Viswavidyalaya on May 27, 2022, and a guest lecture on spice crops in a webinar at MAKAUT on March 26, 2022. He was featured in the World Scientist and University Rankings 2022 and joined as a Review Editor for Frontiers in Natural Products, Switzerland.
21. Prof Subrata Dutta delivered the S.B. Chattopadhyay Memorial Award Lecture (Indian Mycological Society, 2022), convened a session at the National E-Conference on Biotic Stress Management (ICAR-NCIPM, May 19–21, 2022), and gave an invited lecture on weather-based disease forewarning systems at a national symposium at BCKV (Feb 21–22, 2022).
22. Prof. Pallab Datta served as an expert on the selection committee for the post of Professor in Pomology and Post-Harvest Technology at UBKV, Pundibari.
23. Prof. Pradip Kumar Sahu served as an expert in Agricultural Statistics during the ASRB Examination for ARS, ICAR, from April 6–8, 2022.
24. Prof. Mrityunjay Ghosh acted as an expert nominated by the Geographical Indications Registry for a Consultative Group Meeting on Kalonunia Rice, Sundarban Honey, and Marcha Rice on December 5, 2022, aiding in the protection and promotion of these regional products.

25. Prof. Gautam Saha delivered two invited lectures, served as a guest of honor twice, and chaired two technical sessions, demonstrating leadership in academic and research forums.
26. Prof. Mahadev Pramanick was nominated as a member of the Joint Board of Studies meeting at the Institute of Agriculture, VisvaBharati, Santiniketan, and appointed as an expert in the selection committee for Career Advancement Scheme (CAS) at CRIJAF, Barrackpore, contributing to academic and professional evaluations.
27. Prof. Aniruddha Pramanik served as an external examiner for Ph.D. thesis evaluation and viva-voce at Burdwan University's Zoology Department on September 21, 2022, and for practical examinations at Susrijo Institute on December 24, 2022. He was a resource person for the DAESI training course sponsored by MANAGE, Hyderabad, and an external member of the Board of Studies for Agricultural Entomology at Visva-Bharati.
28. Prof. Kalyan Chakraborty won the Best Poster Presentation Award at the National Conference on Climate Resilient and Sustainable Development of Horticulture at CSAUAT, Kanpur, from May 28-31, 2022.
29. Prof. Niharendu Saha acted as subject expert for the Faculty Selection Committee at the School of Agriculture & Allied Science (Agri Microbiology), Neotia University, West Bengal, on July 22 and November 18, 2022.
30. Prof. Susanta Kumar De was nominated as a Board of Studies (BOS) member for the Department of Soil and Water Conservation at the School of Agricultural Science under Nagaland University, contributing to curriculum development and academic oversight in this field.
31. Prof. Subhra Mukherjee served as an External Examiner at the IRDM Faculty Centre in Narendrapur, West Bengal.
32. Prof.P.Bandopadhyay was invited as experts in selection committees in universities and ICAR institutes for CAS of teachers during 2022
33. Prof. K. Brahmachari participated as an expert member in selections held by GoWB.
34. Prof. Manabendra Ray served as a member of the Research Advisory Committee and Institute Management Committee at ICAR-CRIJAF, contributing to research research and administrative oversight. He also acted as a Selection Committee member for the Food Corporation of India, assisting in the selection of an Assistant Director.
35. Prof. Subrata Karmakar was appointed as a Member of the State Project Management and Technical Team (SPMT) for the Farm Mechanization Cell, Department of Agriculture, Government of West Bengal, since October 2022, contributing to farm mechanization initiatives.

36. Prof. Subhasis Kundu served as an External Expert for the Board of Studies in the Department of Horticulture and Post-harvest Technology at VisvaBharati and was an invited speaker for Technical Officer (Horticulture & Forestry) training at Netaji Subhas Administrative Training Institute, Salt Lake, on December 16, 2022, delivering a lecture on plantation works and market linkage.
37. Dr. B. Biswas delivered an invited talk on zero-budget natural farming at a workshop in Birsa Agricultural University, Ranchi (March 24-26, 2022). He was nominated as a member of the State Level Technical Committee on System of Assured Rice Production Technology, served as a visiting expert for the Pradhan Mantri Krishi Sinchayee Yojana, and acted as a lead expert for the West Bengal Accelerated Development of Minor Irrigation Project.
38. Prof. M. Pramanick was invited as experts in selection committees in universities and ICAR institutes for CAS of teachers during 2022
39. Dr. Md. Nasim Ali appointed as External Expert for the Board of Studies (M.Sc., RKMVERI; B.Sc., MAKAUT), expert in "Entrepreneurs Meet" on Farm-based Enterprise (BRAIPARD), resource person in a capacity building program (USTM), Expert-member of ASRB-ICAR for promotion at ICAR-CIFRI, and served as Executive Editor of the *Journal of Crop and Weed* (2019–2023).
40. Dr. S. Gantait has been a member of the Editorial Board for journals including 3 Biotech, Sugar Tech, Plant Cell Tissue & Organ Culture, In Vitro Cellular & Developmental Biology—Plant (Springer), and Horticultural Plant Journal (Elsevier) since 2017, contributing to the advancement of agricultural and biotechnological research.
41. Dr. Srabani Debnath received two Best Poster Awards in 2022: one at the IPS East Zone Meet at BCKV (March 6-7) for her work on plant pathology's role in global food security, and another at the 8th International Conference at SKNAU, Jobner-Jaipur (March 23-26), for her research on common rust of maize in West Bengal.
42. Dr. Poly Saha served as Co-Organizing Secretary of the 3rd International Conference on Sustainable Development Initiatives in Southeast Asia (Nov 7–8, 2022, Saharanpur) and as Rapporteur at the National Symposium on the Role of Plant Pathology in Global Environment and Food Security (Mar 6–7, 2022, BCKV & IPS East Zone).
43. Dr. Jayoti Majumder received the Best Oral Paper Award in 2022 at a National Seminar on Horticulture for Sustainable Development, organized by Uttar BangaKrishiViswavidyalaya.
44. Dr. Anindita Karmakar received the Best Oral Presentation Award at the International Conference on "Contribution of Agriculture for Challenges and Opportunity of Food Security till 2030" held on Oct 15–16, 2022, at Mangalayatan University, Jabalpur.

45. Dr. Soma Biswas acted as a member of the expert committee for the preparation of the Comprehensive District Agriculture Plan (CDAP), PaschimMedinipur.
46. Dr. Gouranga SundarMandalacted as the Burdwan University nominee on the governing body of Indus Mahavidyalaya, contributing to institutional governance and academic administration.
47. Dr. Amitava Banerjee served as an External Expert Committee Member (Entomology) at The Neotia University, South 24 Parganas. He has been an Associate Editor of the Journal of Crop and Weed since2021, and he acted as an External Examiner in UBKV, RKMVERIandVisva-Bharati.
48. Dr. Sibajee Banerjee is awarded with the CWSS young scientist of the year 2022;
49. Dr. Pran Krishna Thakur acted as an external examiner for M.Sc. (Horticulture) thesis viva-voce exams at Uttar BangaKrishiViswavidyalaya and Bihar Agriculture College in 2022. He also served as an external paper setter for B.Sc. (Ag.) at Tripura University.
50. Prof. P.K. Bhattacharyya is actively engaged as a Notified Breeder at BCKV for breeder seed production of rice, lentil, lathyrus, mustard, and chickpea, supporting seed quality and agricultural productivity as per DAC and state indent.
51. Dr. R. Karmakar from AINP on Pesticide Residues & Contaminants at BCKV, acted as an expert for sampling in pesticide residue analysis for a Guwahati High Court case (PIL-18/2018), as directed by the Network Coordinator, ensuring compliance with legal and scientific standards.
52. Best Poster Presentation award was received by Dr. Srabani Debnath for paper entitled “Occurrence and distribution of Common rust of maize inciting pathogen (*Puccinia sorghi*Schw.) in West Bengal” during 8th International conference held at SKNAU, Jobner-Jaipur, Rajasthan, India on 23-26th March 2022.
53. Dr. Gautam Chakraborty: 2nd best Oral presentation Award on 6th International Conference on Current Issues in Agricultural Biological and Applied Sciences for Sustainable Development (CIABASSD-2022), Held on June 11-13-2022 at Kalimpong science centre,
54. Manoj Kumar Nanda acted as Member of Expert Committee, Earth Science and Geoinformatics, Department of Science & Technology and Biotechnology, Govt. of West Bengal.

B. Students

1. Mr. Kausik Atta (Plant Physiology) received the Best M.Sc. Thesis Award at the 6th International Conference on Agricultural, Biological and Applied Sciences (June 11–13, 2022, Kalimpong).

2. Ms. Shinee De, Ms. SusmitaPati, and Ms. Anindita Patwari (Plant Pathology) secured 1st, 2nd, and 1st places, respectively, in poster presentations at the IPS East Zone Meet on March 6-7, 2022, at BCKV, showcasing their research in plant pathology.
3. Mr. Krishnendu Kundu (Plant Pathology) received the Best Oral Presentation Award at the IPS East Zone Meet on March 6-7, 2022, at BCKV, for his contributions to plant pathology research.
4. Dr. Priyankar Mondal, Ph.D., was awarded the Young Agricultural Scientist Award 2022 by the Dr. B. Vasantharaj David Foundation for his significant contributions to the taxonomy of mites of the Family Tarsonemidae.
5. Sourav Chakraborty ranked AIR-1 and SourenMandal ranked AIR-25 in the AIEEA-PG/JRF 2022-23 conducted by ICAR in Entomology and Nematology, demonstrating exceptional academic excellence.
6. Dr. Meenambagai C, Ph.D. in Agricultural Entomology (2022), secured 1st position in a poster presentation under "Crop Weather and Forewarning Models" at the National Conference AGMET 2022, highlighting her research on predictive agricultural models.
7. Dr. Mritunjoy Barman, Ph.D. in Agricultural Entomology (2022), received the Best Oral Presentation Award under "Crop Protection and Stress Management" at a National Seminar on Horticulture for Sustainable Development, Nutritional, and Livelihood Security at UBKV, Coochbehar.
8. Balguri Lavanya Sravani from the Department of Agricultural Entomology received the Inspire Fellowship (2019-2024), supporting her research in entomology.
9. Gollapelly Ravi from the Department of Agricultural Entomology secured the ICAR Senior Research Fellowship (2021-2024), aiding his advanced studies in entomology.
10. Amrita Sarkar, S.K. Acharya, Arnab Banerjee, SwagataPatra, Sudipta Chandra, and Manirul Haque, won Best Paper Awards at the International Conference on Green Technology, Agriculture Information Technology, Business Management, and Social Sciences, held July 16-17, 2022, at Centurion University, for their work on weather uncertainty and chaos in Indian farming.
11. Purbasa Kole (AIR-1), Chandra Saha (AIR-2), Tripti Pal (AIR-3), SupriyoDhara (AIR-8), TanushreeGhose (AIR-12), SaikatMaity (AIR-14), SubhajitRakshit (AIR-28), and AnirbanBarik (AIR-36). UGC NET JRF recipients included AnweshaSamanta, Subhadip Saha, Samayita Basu, and Souvik Dey, with Md. Wahiduzzaman receiving the NFPWD.
12. Ph.D. students Debolina Sarkar and Momsona Mandal from the Agricultural Meteorology and Physics Department received the UGC Single Girl Child Fellowship, and Dr. Sarath Chandran bagged the PSN Sastry Best Ph.D. Thesis Award, recognizing their outstanding research contributions.

13. Dr V Visha kumara, research scholar, Agronomy, received Dr. P. S. Deshmukh Young Agronomist Award- 2022
14. Mr Anurag Bera, PG student, Agronomy, received best M. Sc thesis award by the Indian Society of Agronomy
15. Ms. Purabi Banerjee, has been awarded Best M.Sc. thesis award, 2019 at ICAR-Central Research Institute for Dryland Agriculture (CRIDA), Hyderabad, India, from 22-24 December 2022
16. Pratap Ghosh (Rank-AIR 40, EWS 08) in Plant Science. Manas Kundu (Rank-AIR 01, GAT-B) in Plant Science (IISc, Bengaluru) Moumita Roy (JAM 56) in Plant Science (IIT, Bombay)

Seminar/Symposium/Workshop/Summer-Winter School/Webinar attended or organized

A. ATTENDED:

a. Seminar/Symposium/Conference attended: 98

b. Workshop/Group meeting attended: 53

c. Summer-Winter School/Training attended: 22

B. ORAGINED

1. ICAR-AICRP on fruits hosted a workshop on awareness of commercial fruit cultivation by organizing the 'Fruit Festival'
2. AICRP (STCR) scheme organized World Soil Day cum Seminar on 5th December, 2022 at Regional Research Station, BCKV, Gayeshpur by inviting 200 number of 11th -12th standard students from two high schools from Haringhata Block, Nadia for awareness campaign on soil and water testing, environmental pollution from agriculture sector, judicious manures and fertilizer recommendation etc. funded by ICAR.
3. AICRP on Tuber Crops organized 23rd Annual Group Meeting (AGM) of ICAR-AICRP on Tuber Crops on 10-12 March 2023 at FACC, BCKV, Kalyani in association with Indian Council of Agricultural Research
4. AICRP on Weed Management organized National Webinar on Weed Management.
5. AICRP on weed management organized two workshops on Chickpea cultivation in West Bengal
6. Department of Agricultural Chemistry and Soil Science organized 4 months training on 'Soil Testing and Fertilizer Recommendation' to unemployed youth through RIDF Project on Farmers Service Centre for Soil Testing and Fertilizer recommendation during 23.09.2022-25.01.2023.
7. Department of Agricultural Chemistry and Soil Science organized 'World Soil Day' on 05.12.2022 at RRS Gayespur jointly with AICRP on STCR.
8. Department of Fruit science organized 1st Fruit Diversity Fair at BCKV, Mohanpur on 17 June, 2022 on behalf of ICAR-AICRP on Fruits.
9. Department of Genetics and Plant Breeding organized Farmers Training programs under TSP, SCSP, Field Day on upscaling farmers jute cultivation.
10. Department of Genetics and Plant Breeding organized summer training on allele mining in rice and lentil, and plant tissue culture of commercial plants from the following Institutes: KIIT, Bhubaneswar; Amity University (Kolkata, Noida), Shoolini University (Solan, HP), Gurunanak Institute of Technology (WB); Department of Molecular Biology and Biotechnology, Kalyani University.

11. Directorate of Extension Education (DEE) organized 1 day workshop on “Production Technology of Millet Cultivation for Ensuring Nutritional Security" during 29th March 2023, at the Seminar Hall, DEE, BCKV, Mohanpur, Nadia.
12. Directorate of Extension Education organized 2 days HRD Training Programmer on “Innovative Approaches in Agriculture Horticulture and Allied Sector with Special Focus on Natural Farming” during 30-31 March 2023, at Directorate of Extension Education, BCKV, Mohanpur, Nadia.
13. Directorate of Extension Education organized a 2-day human resource development (HRD) training program on "Recent Development in Agriculture for Sustainable Farming" for the Subject Matter Specialists and Farm Managers working in different KVKs of Zone-V during November 17-18, 2022 at DEE, BCKV, Mohanpur, Nadia.
14. RRS Jhargram organized Farmers’ Training for cashew farmers (funded by DCCD, Kerala, India) at RRS, Jhargram.

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Sl. No.	Source	(Rs. In Lac.) Actual Receipt 2022-23
	A.	
	Head	
1	Main Campus (including Bardhaman and Bankura College)	**1393838312.00**
	Total (Non Plan)	**1393838312.00**
1	AICRP 25% of State Share	
2	State Ad-hoc Project	2058166.00
3	RIDF Projects	9076.00
4	RKVY	6803071.00
5	Training Programme	
	Total (Plan)	**8870313.00**
	Total A (Non Plan + Plan)	**1402708625.00**
	B.	
1	ICAR 75% share of AICRPs and AINPs	105430731.00
2	ICAR Ad-hoc Projects 100%	9522975.00
3	Development Grant (ICAR) (RAWE, NTS, Scholarship)	8651194.00
4	KVKs (Howrah, Hoogly, Nadia) 100%	113185000.00
5	Mega Seed Project (Including Revolving Fund)	5907706.00
	Total (B)	**242697606.00**
	C.	
1	Grants received from the Govt. of India on Comprehensive scheme 100% Plan	13200000.00
2	Grants received from Govt. of India on Agromet Advisory Service 100% Plan	3643781.00
3	Grants Received from the Govt. of India on Ad-hoc Schemes 100%	25000869.00
4	RNARC	682914.00
	Total (C)	**42527564.00**
	D.	
1	Private/Corporate Projects	51056484.00
2	Seminer, Workshop and Training	1756705.00
	Total (D)	**52813189.00**
	E.	
1	Internal Resource Generation	56286173.00
	Total (E)	**56286173.00**
	Total (A+B+C+D+E)	**1797033157.00**

Sl. No.	Name of Units	(Rs. In Lac) Actual Expenditure for 2022-23
A.	**Non Plan (Govt. of West Bengal)**	1393838312.00
	Grant-in Aids (Mohanpur, Burdwan and Bankura)other than Retirement benefits	
	Retirement Benefits	
	TOTAL :- A	**1393838312.00**
B.	**Plan (Govt. of W.B)**	
1	All India Co-ordinated Research Project (25%)	
	College of Agriculture at Bardhaman	
	College of Agriculture at Bankura	
4	State Ad-hoc Schemes (100%)	1003379.00
5	RIDF Projects	935364.00
6	RKVY	73220583.00
7	Training Programme	
	TOTAL :- B	**75159326.00**
	Non-plan and Plan (Govt. of W.B.):	
C.	**Plan (I.C.A.R. Projects)**	
1	All India Co-ordinated Research Project (75%)	132575997.00
2	KVK, Nadia, Hooghly, Howrah (100%), Purba Medinipur ICAR	91822265.00
3	ICAR Ad-hoc Schemes 100%	9578796.00
4	Mega Seed Project	3814775.00
	TOTAL :- C	**237791833.00**
D.	**Govt. of India Plan**	
1	Comprehensive Scheme (100%), Govt. of India	7733408.00
2	Agromet Advisory Serv. (100%), Govt. of India	3536071.00
3	Govt. of India Ad-hoc Schemes (100%)	19244883.00
4	RNARC Projects	4426375.00
	TOTAL:-D	**34940737.00**
E.	**I C A R Development Grant (RAWE, NTS, Scholarship)**	7216262.00
	Private/Corporate Projects	44211664.00
	Seminer, Workshop & Training	1745712.00
	TOTAL :-E	**53173638.00**
	GRAND TOTAL (A+B+C+D+E)	**1794903846.00**

REPORT OF THE NODAL CELL

Financial year of report: 2022

Name of the Vice-Chancellor along with his Date of Joining: Prof. B S Mahapatra

Whether present Vice Chancellor is permanent or acting: Permanent

Year of establishment: 1974

Details of the Nodal Officer for Agricultural Education Division, ICAR (Please also provide mobile no and email): Prof. Abhijit Saha, Department of Agricultural Meteorology and Physics, and Faculty of Agriculture, +91 9433317027, nodaloff.bckv@gmail.com

Brief Introduction along with mandate and objective of the university

The Bidhan Chandra Krishi Viswavidyalaya, established in 1974 vide West Bengal Act XLIS of 1974, has already completed more than four decades of its existence as the pioneer seat of agricultural education, research and extension. The university offers UG, PG and Doctoral programmes. All the three teaching faculties namely, Faculty of Agriculture, Faculty of Horticulture and Faculty of Agricultural Engineering offer 4-years under graduate degree programme leading to the degree of B.Sc. (Hons.) Agriculture, B.Sc. (Honours) Horticulture and B. Tech. (Hons) (Ag. Engg.). There are 25 departments distributed over the three faculties of which 16 falls under the Faculty of Agriculture, 5 under the Faculty of Horticulture and 4 under the Faculty of Agricultural Engineering. While all the aforesaid departments offer UG and Doctoral programme, Master degree courses are being offered from 24 departments. The intake capacity for UG studies across the faculties of Agriculture (including Burdwan and Bankura extended campus), Horticulture and Agril. Engineering are 194, 37 and 38 respectively. Similarly, for Master degree programme, as offered from various teaching departments of the faculties of Agriculture, Horticulture and Agricultural Engineering are 207, 40 and 23 respectively.

It has three Regional Research Stations and three Regional Research Sub-Stations all of which have well defined farms to carry out mandated research activities on location specific problem focused areas of production systems. The University currently runs 22 AICRPs and 3 AINPs, and 230 nos. of ad-hoc research project from various funding agencies of State Ggovernment /ICAR and private enterprises. The outreach delivery system of the University is composed of four Krishi Vigyan Kendras (KVKs); training units attached to the Directorate, Regional Research Stations & Sub-stations; Agricultural Technology Information Centre (ATIC); well dispersed Extension Education Units (EEUs); Farm Information & Publication Unit and a well-equipped Exhibition Unit.

Mandate of the University

In accordance with the University Act, Bidhan Chandra Krishi Viswavidyalaya has the following mandate:

- To provide facilities for the study of agriculture, both basic and applied sciences relating to terrestrial and aquatic crops agricultural engineering and technology, horticulture, marketing and processing, land use and management, soil and water management and all matters collected therewith and incidental thereto.
- To conduct researches in these sciences and undertake the educational and extension programmes in agriculture among the rural clientele base, keeping in view the requirements of the state.
- To provide appropriate technical and consultative support to the state government towards its implementation of agricultural development programme.

Objectives of the University

- To provide facilities for study of agriculture and allied subjects looking at the prosperity of rural West Bengal
- To conduct research in agricultural and allied sciences
- To undertake outreach education programmes concerning agriculture and allied pursuits
- To provide appropriate technology support and consultation/advices to the state government and its activities for development of agriculture

No. of constituent colleges : 5

No. of affiliated colleges : Nil

Details of all constituent colleges

SN	Name of Constituent College	Year of Establish-ment	Location of along with		Designation of Head of Colleges (Dean/Associate Dean)	Telephone No.	Official email of College
			Place	District			
1.	Faculty of Agriculture	1974	Mohanpur	Nadia	Dean	033-25878338	deanofag.bckv@gmail.com
2.	Faculty of Horticulture	1996	Mohanpur	Nadia	Dean	09433565299	dean.ht@bckv.edu.in
3.	Faculty of Agricultural Engineering	1996	Mohanpur	Nadia	Dean	03473-222657	dean.ae@bckv.edu.in
4.	College of Agriculture	2014	Burdwan	Burdwan	Associate Dean	09434168936	mukherjee.subhra@bckv.edu.in
5.	College of Agriculture	2015	Chatna	Bankura	Associate Dean	9433438870	de.susanta.kr@bckv.edu.in

Academic programmes in university/ all constituent colleges/faculty

Sl No.	Name of the Constituent College/Faculty	Bachelor's		Master's		Ph. D.	
		Progra-mme	Duration	Programme	Duration (Semester)	Programme	Duration (Semester)
1.	Faculty of Agriculture	B.Sc. (Hons.) Agriculture	8 Semester	Agronomy	4	Agronomy	6
				Agricultural Biochemistry	4	Agricultural Biochemistry	6

				Agricultural Chemicals	4	Agricultural Chemicals	6
				Agril. Chem. & Soil Sc.	4	Agril. Chem. & Soil Sc.	6
				Agricultural Entomology	4	Agricultural Entomology	6
				Agricultural Economics	4	Agricultural Economics	6
				Agricultural Extension	4	Agricultural Extension	6
SN.	**Name of the Constituent College/Faculty**	**Bachelor's**		**Master's**		**Ph. D.**	
		Progra-mme	**Duration**	**Programme**	**Duration (Semester)**	**Programme**	**Duration (Semester)**
1.				Agril. Meteorology	4	Agril. Meteorology	6
				Agricultural Statistics	4	Agricultural Statistics	6
				Genetics & Plant Breeding	4	Seed Science & Tech.	6
				Plant Pathology	4	Agril Molecular Biology and Biotechnology	6
				Plant Physiology	4	Genetics & Plant Breeding	6
				Seed Science & Tech.	4	Plant Pathology	6
2.	Faculty of Horticulture	B.Sc. (Hons.) Horticulture	8 Semester	Vegetable Science	4	Vegetable Science	6
				Fruit Science	4	Fruit Science	6
				Floriculture and Landscape Architecture	4	Floriculture and Landscape Architecture	6
				Plantation, Spices, Medicinal and Aromatic crops	4	Plantation, Spices, Medicinal and Aromatic crops	6
				Postharvest Technology	4	Postharvest Technology	6
3.	Faculty of Agricultural Engineering	B. Tech. Agricultural Engineering	8 Semester	Soil and Water Engg.	4	Soil and Water Engineering	6
				Farm Machinery & Power	4	Farm Machinery & Power	6
				Post-Harvest Engineering	4	Post-Harvest Engineering	6
				Food Engineering	4	Food Engineering	6
4.	College of Agriculture, Burdwan	B.Sc. (Hons.) Agriculture	8 Semester	Don't have PG curriculum		Don't have Ph D curriculum	
5.	College of Agriculture, Chatna	B.Sc. (Hons.) Agriculture	8 Semester	Don't have PG curriculum		Don't have Ph D curriculum	

Student status in university/ all constituent colleges/faculty

SN	**Name of College**	**Parameters**	**Numbers**				
			Bachelor's	**Master's**	**Ph. D.**	**Others including Diploma**	**Total**
1.	Faculty of Agriculture	Intake (1st Yr)	154	148	84		386
		Enrolled (1st Yr)	151	110	70		331
		Passed Out	**114**	**173**	**90**		**377**
2.	Faculty of Horticulture	Intake (1st Yr)	38	33	33	**No other Degrees are conferred**	104
		Enrolled (1st Yr)	31	30	24		85
		Passed Out	**27**	**39**	**21**		**87**
3.	Faculty of Agricultural	Intake (1st Yr)	32	10	7		49
		Enrolled (1st Yr)	25	9	6		40

	Engineering	Passed Out	**37**	**32**	**1**	**70**
4.	College of Agriculture, Burdwan Campus	Intake (1st Yr)	32	**No Master's and PhD Degree**		32
		Enrolled (1st Yr)	32			32
		Passed Out	**31**			**31**
5.	College of Agriculture, Chatna, Bankura	Intake (1st Yr)	32			32
		Enrolled (1st Yr)	30			30
		Passed Out	**27**			**27**

Affiliated private colleges with the university: No affiliated college

Category wise total number of students in the university during the reported period

Degree	Faculty / College	No. of students							
		SC	ST	OBC-A	OBC-B	General	Others	ICAR	Total
Bachelor's	Faculty of Agriculture	114	30	82	279	30	535	114	30
	Faculty of Horticulture	31	6	21	79	3	140	31	6
	Faculty of Agril. Engineering	29	8	24	60	2	123	29	8
	College of Agriculture, Burdwan	28	8	19	69	4	128	28	8
	College of Agriculture, Chatna	28	7	19	67	4	125	28	7
Master's	Faculty of Agriculture	64	20	43	173	2	302	64	20
	Faculty of Horticulture	9	4	6	42	1	62	9	4
	Faculty of Agril. Engineering	10	1	2	19	0	32	10	1
Ph. D.	Faculty of Agriculture	32	8	18	86	191	335	32	8
	Faculty of Horticulture	9	2	3	23	42	79	9	2
	Faculty of Agril. Engineering	2	0	0	7	15	24	2	0
Total		356	94	237	904	294	1885	356	94

Gender pattern amongst students enrolled in university/ constituent college/faculty

SN	Name of College	Parameters	Numbers (including 1st, 2nd, 3rd, 4th, 5th, and 6th year as applicable)			
			Bachelor's	Master's	Ph. D.	Total
1.	Faculty of Agriculture	Male	321	201	205	727
		Female	214	101	130	445
		Total	**535**	**302**	**335**	**1172**
2.	Faculty of Horticulture	Male	85	42	43	170
		Female	55	20	36	111
		Total	**140**	**62**	**79**	**281**
3.	Faculty of Agricultural Engineering	Male	98	26	20	144
		Female	25	06	4	35
		Total	**123**	**32**	**24**	**179**
4.	College of Agriculture, Burdwan	Male	82	These two colleges don't have any Masters and Doctoral degree programme.		82
		Female	46			46
		Total	**128**			**128**
5.	College of Agriculture, Chatna	Male	88			88
		Female	37			37
		Total	**125**			**125**

Details of hostels in the university including constituent college

Sl. No.	Name of the Hostel	Type of hostel	Place with District	Availability of Wi-Fi/ Internet	Accommodation facilities in number			Alternative arrangements	
					No. of Rooms	Beds	Total no. of allotted Beds	Rooms	Beds
1	Matangini Abas	Girls	Mohanpur, Nadia	No	76	267	265	1	3
2	Mahasweta Abas	Girls	Mohanpur, Nadia	No	31	97	91	-	-
3	Nivedita Abas	Main Hostel	Girls	Mohanpur, Nadia	No	28	91	50	-	-
		Staff Quarter : wings of Nivedita Abas	Girls	Mohanpur, Nadia	No	-	-	-	12	24
4	Borlaug Abas	Girls	Mohanpur, Nadia	No	23	45	45	-	-
5	Raman Abas	Boys	Mohanpur, Nadia	No	86	225	195	-	-
6	Jagadish Abas	Boys	Mohanpur, Nadia	No	96	202	202	-	-
7	Vidyasagar Abas	Boys	Mohanpur, Nadia	No	144	160	160	-	-
8	Rabindra Abas	Boys	Mohanpur, Nadia	No	132	190	122	-	-
9	Nazrul Abas	Main Hostel	Boys	Mohanpur, Nadia	No	12	24	20	-	-
		Staff Quarter – 1, wings of Nazrul Abas	Boys	Mohanpur, Nadia	No	-	-	-	18	30
		Staff Quarter – 2, wings of Nazrul Abas	Boys	Mohanpur, Nadia	No	-	-	-	12	24
		Staff Quarter – 3, wings of Nazrul Abas	Boys	Mohanpur, Nadia	No	-	-	-	18	30
10	Netaji Abas	Boys	Kalyani, Nadia	Internet	31	68	41	-	-
11	Arabinda Abas	Boys	Kalyani, Nadia	Internet	30	70	72	-	-

Present faculty strength in the university/college/ faculty

SN	Name of the University/ College/ Faculty	Sanctioned				Faculty based on present designation in position after CAS implementation			
		Prof.	Assoc. Prof.	Asst. Prof.	Total	Prof.	Assoc. Prof.	Asst. Prof.	Total
1.	Faculty of Agriculture	19	47	109	175	73	23	59	155
2.	Faculty of Horticulture	6	14	22	42	25	5	5	35
3.	Faculty of Agril. Engineering	5	5	12	22	5	1	4	10
4.	College of Agriculture, Bankura	11	0	11	22	0	0	9	9
5.	College of Agriculture, Burdwan	11	0	11	22	0	0	9	9
	Total	**52**	**66**	**165**	**283**	**103**	**30**	**86**	**218**

Budgetary support to the university (Rs. in lakh)

Budget Heads	Total Funding form State Government			Funding support from ICAR(Rs. lakh)				Total ICAR support	Any other central funding**	Grand Total
				Education Division	AICRP	KVK	Any other ICAR support*			
	Plan 1	Non-Plan 2	Total 1+2=3	4	5	6	7	(4+5+6+7) = 8	9	3+8+9
Salary	0	13564.12	**13564.12**	0	846.56	867.28	0	**1713.84**	0	**15277.96**
Capital	0	77.11	**77.11**	0	3.77	111.07	0	**114.84**	0	**191.95**
Revenue	0	297.15	**297.15**	86.51	203.97	153.50	95.22	**539.20**	256.83	**1093.18**
Total	**0**	13938.38	**13938.38**	86.51	1054.30	1131.85	95.22	**2367.88**	256.83	**16563.09**

* including CAAST etc. **including DST, DBT, ICMR, RKVY

Total revenue generation from all sources by Agriculture University including off campus colleges

Student's Collection	-	283.25Lakh
Sale Proceed of farms	-	52.04Lakh
Misc. earnings	-	227.57Lakh
Total amount		**562.86Lakh**

All new/existing civil works repair and renovation under taken out of the development grant : No Fund Sanction during the year

Details of sports facilities strengthened by ICAR: No Fund Sanction during the year

Total number of smart class room developed (Till date): No Fund Sanction during the year

Equipments purchased/replaced from development grantsduring the reporting period : No Fund Sanction during the year

IT equipment's including hardwares/softwares etc.purchased from the development grants : No Fund Sanction during the year

Furnitures and fixtures purchased out of development grant for hostel, laboratory, exam hall and class room : No fund Sanction during the year

Status of internet and Wi-Fi connectivity

SN	Name of the Constituent College/ Faculty	Internet	Wi-Fi	Remark, if Any
1.	Faculty of Agriculture, Mohanpur	Yes	Yes	Departmental Wi-Fi is available in all faculties.
2.	Faculty of Horticulture, Mohanpur	Yes	Yes	
3.	Faculty of Agricultural Engineering, Mohanpur	Yes	Yes	
4.	College of Agriculture, Burdwan	Yes	Yes	
5.	College of Agriculture, Chatna, Bankura	Yes	Yes	

Number of student beneficiaries availing RAWE/RHWE/In-plant training/internship under student READY programme in the university (Rs. in lakh)

SN	Name of the University/ College/ Faculty	No. of Student Beneficiaries along with Stipend given						Total	
		RAWE		In-plant training		Internship			
		No.	Stipend	No.	Stipend	No.	Stipend	No.	Stipend
1.	Faculty of Agriculture	115	20.70	-	-	-	-	115	20.70
2.	Faculty of Horticulture	33	5.94	-	-	-	-	33	5.94
3.	Faculty of Agricultural Engineering	-	-	34	5.10	25	0.75	59	5.85
Total		**148**	**26.64**	**34**	**5.10**	**25**	**0.75**	**207**	**32.49**

RAWE – Rural Agricultural Work Experience**,** RHWE – Rural Horticultural Work Experience

Number of student beneficiaries availing National Talent Scholarship (NTS) in the University (Rs. in Lakh)

SN	Name of the university/ college/ faculty	No. of student beneficiaries				Grand total	
		UG-NTS		PG-NTS			
		No.	Total Stipend	No.	Total Stipend	No.	Total Stipend
1.	Faculty of Agriculture	19	5.51	17	7.04	36	12.55
2.	Faculty of Horticulture,	5	1.61	5	2.04	10	3.65
3.	Faculty of Agricultural Engineering,	5	1.61	5	2.04	10	3.65
Total		**29**	**8.73**	**27**	**11.12**	**56**	**19.85**

Status of Experiential Learning (EL) Module established in the university (Rs. in Lakh)

Year	Name of College along with location	Name of the EL Modules	Established with Support from ICAR/University/State	Nodal Officer of EL module, their mobile no &Email	Grant Received (Rs. in lakh)	No. of Students trained under EL	Product being developed under EL	Revenue earned (Rs in Lakh)	Revolving Fund Generated (Rs in Lakh)	% Share of income distributed to students
2011-12 & 2012-13	Faculty of Agriculture, BCKV, Mohanpur	Commercial Apiculture	ICAR	Prof. Shantanu Jha 9433011529 sjha2007@gmail.com	60.00 (25.00 +35.00)	2021 -22 Trained - 35 nos. Stud.	Honey			50% share distribution on profit
2011-12 & 2012-13	Faculty of Horticulture, BCKV, Mohanpur, Nadia, West Bengal	Commercial Horticulture	ICAR	Prof. Umesh Thapa 9830234577 dr.umeshthapa@yahoo.in	65.00 (25.00 + 40.00)	2021-22=13	High value vegetables, flowers and quality planting materials	Rs. 0.174 lakh	Rs. 0.062 lakh	100% share distribution on profit
2018-19 (Ne	Faculty of Horticulture, BCKV,	Processing of Fruits and Vegetables for value	ICAR	Prof. Surajit Mitra 9433513560 drsurajitmitra@yahoo.co.in	80.00	2021-22=15	Different fruit beverages in	Rs. 0.496Lakh	Rs.0. 344 lakh aterials of Rs.2.5lakh	50% share distribution on

w)	Mohanpur, Nadia, West Bengal	addition (Fruit Beverage Unit)					commercial scale		n stock in hand)	profit
2006-07	Faculty of Agricultural Engineering, BCKV, Mohanpur, Nadia, W. B.	Maintenance and Custom-hiring of Farm Machinery and equipment	ICAR	Prof. P. S. Chattopadhyay 9903406877 pschattopadhya@yahoo.com	18.00	2021-22=9	Service-B .Tech (Agricultural Engineering) students are getting training on maintenance of farm machinery	-	**Skill mode**	-
2006-07	Faculty of Agricultural Engineering, BCKV, Mohanpur, Nadia, W. B.	Drip Fertigation to Fruit Crops for Better Yield and Economy	ICAR	Prof. P.S. Chattopadhyay pschattopadhya@yahoo.com chattopadhyay.ps@bckv.edu.in	15.30	2021-22=9	Irrigation facility	-	Business Mode	-
2006-07	Faculty of Agricultural Engineering, BCKV, Mohanpur, Nadia, W. B.	Model rice based Agroprocessing Unit	ICAR	Prof. Souti Mukherjee 9836991461 souti62@rediffmail.com	68.00	2021-22=10	Rice Processing	-	**Skill mode**	-
2008-09	Faculty of Agricultural Engineering, BCKV, Mohanpur, Nadia, W. B.	Design, fabrication and testing of Farm machinery	ICAR	Prof. P.S. Chattopadhyay pschattopadhya@yahoo.com chattopadhyay.ps@bckv.edu.in	180.00	2021-22=9	In house training for students in the workshop in design, fabrication and testing of small farm machinery	-	**Skill mode**	-
Total (Grant Received 2006-07 to 2018-19)					**486.30**	**100**		**0.669**	**0.406**	**50%**

Curriculum Development & Delivery:

SN	Name of the Faculty	Title of Practical/ Instructional Manuals developed	Available offline or online, if yes then web address
1.	Faculty of Agriculture	Practical manual on Acarology	These practical manuals along with the manuals published earlier by different Departments are available off line. However, these manuals will be available online in future.
2.		PRACTICAL MANUAL on BIOTECHNOLOGY FOR CROP IMPROVEMENT [COURSE NO. : GPB 553]	
3.		Mitra M, Swain H, Debsarma O and Mandal N (2023) Biotechnological interventions in upscaling of plant secondary metabolites. In: Futuristic trends in Biotechnology. IIP Procedings, Vo. 2, Book 26, Chapter 15, pp. 245-261.	
4.		Sutradhar M and Mandal N (2023) Indirect regeneration of indica rice from mature seeds: The current scenario. In:	

		Futuristic trends in Biotechnology. IIP Procedings, Vo. 2, Book 26.	
5.		PRINCIPLES OF SEED TECHNOLOGY (SST-253)	
6.		SEED TECHNOLOGY (SST-551)	
7.		SEED PROCESSING AND STORAGE (SST-602)	
8.		Quality control of seeds (SST-316)	
9.		RAWE Manual, BCKV,2022	
10.		Water Management of Field Crops (AGR 151),	
11.		Fundamentals of Applied Entomology	
12.		Annual Planning of Weed Pest Management in System Agriculture	
13.		Practical Manual on Crop Improvement-II Kharif crops (GPB-303) by (For B.Sc.(Ag.) Hons. 5th semester students), 1st Edition, 2020, BCKV, West Bengal	
14.		Practical Manual on Crop Improvement-I Rabi crops (GPB-254) by (For B.Sc. (Ag.) Hons. 4th semester students), 1st Edition, 2021, BCKV, West Bengal	
15.		ANALYSIS OF SOIL PHYSICAL PARAMETERS	
16.		Practical Manual on Crop Improvement - I (Rabi Crops) GPB-254	
17.		Practical Manual on Crop Improvement - I (Kharif Crops) GPB-303	
18.		Practical manual on Crop Improvement -I (Rabi crops) (GPB 254)	
19.		Practical manual on Crop Improvement -II (Kharif crops) (GPB 303)	
20.	Faculty of Horticulture,	Water Management of Horticultural Crops (Hort 102)	
21.		Practical Manual of Temperate Fruit Crops (BSC Horti Hons)	
22.		Practical Manual on Fundamentals of Horticulture, Course No. Hort 101 for B.Sc. (Hort.) Hon's courses.	

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

SN	Name of the University/ College/ Faculty	Location & District	ICAR	CAU/SAU	Central Govt.	State Govt.	PDF/ Foreign	Pvt./Others
1.	Faculty of Agriculture	Mohanpur, Nadia	3	1	40	6	6	32
2.	Faculty of Horticulture,	Mohanpur, Nadia	0	0	13	0	0	4
3.	Faculty of Agricultural Engineering,	Mohanpur, Nadia	0	0	3	2	0	3
Total			**3**	**1**	**56**	**8**	**6**	**39**

Number of Faculty Attended Seminars/Symposia/CBP (ICAR Funds)

SN	Name of the university/ college/ faculty	Location & District	Professor	Associate Professor	Assistant Professor
1.	Faculty of Agriculture	Mohanpur, Nadia	10	5	52
2.	Faculty of Horticulture	Mohanpur, Nadia	1	1	
3.	Faculty of Ag. Engineering	Mohanpur, Nadia	-	-	-

Linkages with ICAR Institutes for Academic Research:

SN	Name of the ICAR Institute	Nature of Support		
		Teaching	Ph D Guidance	Lab Facilities
1	NBSSLU&P, Regional Station, Kolkata	√		
2	ICAR: CIFRI, Barrackpore, WB			√
3.	ICAR- ATARI, Kolkatta	√		
4.	ICAR-NCIPM, New Delhi		√	
5.	ICAR-IIRR, Hyderabad			√
6	ICAR-DMR, Solan, HP		√	√
7.	ICAR-CRIJAF, Barrackpore, W.B.	√	√	

Good Governance

Item	Number	Dates
Meeting of the executive council held	254th, 255th, 256th, 257th ,258th	31/05/2022,12/08/2022,23/11/2022,16/12/2022,16/02/2023
Meeting of Faculty Council F. Agriculture.	136th, 137th	21/11/2022,14/12/2022
Meeting of FC of F. Horticulture	57th, 58th,	21/11/2022,15,12,2022
Meeting of FC of F. Agril. Engineering	46th, Emergent meeting	18/11/2022,15/12/2022

Please mention Ten Most Significant Achievements/Impacts out of the ICAR Development Grant Provided to the University: No fund under ICAR Development Grant received during 2022-23

Two Major Constraints Faced by the University for Enhancement of Education Quality:

a) In spite of 27 of our academic programmes being accredited, including three major UG programmes in Agriculture, Horticulture and Agril. Engineering along with BCKV (as university) , university is not getting any financial support from ICAR since the financial year 2021-22 which is urgently required for smooth conduction of academic programmes

b) Number of Boys' and Girls' Hostel are inadequate to accommodates our UG, PG and PhD students comfortably.

In the Opinion of the Vice-Chancellor, Justification for Continuing ICAR Support During XIII Plan:

BCKV did not receive any fund under ICAR Development Grant since the year 2021-22 till date and so conduction of regular academic activities is being affected to a great extent due to financial crisis. Hence, continuing ICAR Support During XIII Plan is of utmost important to us because of the following:

a. Procurement of minor equipment for conduction of UG/PG/PhD Practical classes

b. Financial support to faculty members for participation in seminar/symposia/workshop

c. Procurement of Books and other library facilities
d. Construction of new Girls' Hostel
e. Completion of University auditorium, for which vetting is awaited from ICAR end.
f. Day-to-day activities of ICAR Nodal Cell, which has to comply various documentation processes prescribed by ICAR throughout the year
g. Procurement of new and maintenance of existing ICT infrastructure
h. Development of Incubation Centre for mentoring interested students to become agripreneur.
i. Development of new ELP Units and upgradation of existing ELP Units for UG students

List of Top Five Priority Areas Related to Higher Agriculture Education Improvement that University Wishes ICAR to Support:

a. Construction of new Boys' and Girls' Hostel and upgradation of existing Hostel Facilities. With increase in intake capacity at various levels the existing accommodation facility particularly for girls has become insufficient. Massive renovation and modernization is also needed for the existing hostels.
b. Construction of University Auditorium, for which, only a small fund (1.8 crores out of 10.00 crores) has only released. Rest of the funds, considering the escalation of the estimated expenditure (12.67 crores), need to be released by ICAR along with vetting of modified plan by ICAR.
c. The university requires funding for new ELPs as well as a one-time grant for the existing ELPs so that they would be converted to commercial mode. Most of the existing ELPs (except two) are more than 10 years old and they were developed in skill mode during that time. They need to be modernized or replaced with new concepts for which generous fund support from ICAR is badly needed.
d. University has already implemented Restructured and Revised Syllabi of ICAR for PG and PhD course as recommended by BSMA Committee from 2022-23. To cater such thoroughly revised courses, a huge investment in modernizing existing laboratories and ICT infrastructure, as per requirement of the modified syllabus, is needed for which we seek generous support from ICAR.
e. Two of our constituent colleges, viz, College of Agriculture, Burdwan and College of Agriculture, Susunia, have got generous support from Govt. of West Bengal for construction of academic and administrative buildings as well as Student Hostels. Students have been shifted to new sprawling campus with modern living facilities. However, for upgradation of newly built laboratories and farm facilities, as recommended by Peer Review Team of ICAR (April 2022) during accreditation, generous support from ICAR is urgently needed.

Details of Financial Progress of Development Grant

Name of the University: Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia

Financial Year of the Demand: 2022-23 (Rs. in Lakh)

SN	Components	Allocation of Grant	Main campus	F./Ag.	F./Hort.	F./Ag. Engg.	PG Faculty	Total of University
A.	**Grant-in-Aid CAPITAL**							
1	**Works**							
1.1	**a. Land**	×	×	×	×	×	×	×
1.2	**b. Building**	×	×	×	×	×	×	×
1.2.1	Girls' Hostel	×	×	×	×	×	×	×
1.2.2	Boys' Hostel	×	×	×	×	×	×	×
1.2.3	International Hostel	×	×	×	×	×	×	×
1.2.4	Examination Hall	×	×	×	×	×	×	×
1.2.5	Educational Museum	×	×	×	×	×	×	×
1.2.6	University Auditorium	×	×	×	×	×	×	×
1.3	**c. Works**	×	×	×	×	×	×	×
1.3.1	Repair/ Renovation of Hostel	×	×	×	×	×	×	×
1.3.2	Repair/ Renovation of Examination/ Laboratories/ Sports Facility/ Green Initiatives	×	×	×	×	×	×	×
1.3.3	Refurbishing of Smart Class Rooms	×	×	×	×	×	×	×
1.3.4	Centenary Grant/ Renovation of Old and Historical Infrastructure	×	×	×	×	×	×	×
2	**Equipment**	×	×	×	×	×	×	×
2.1	Equipment for Central Instrumentation Facility	×	×	×	×	×	×	×
2.2	Equipment for UG & PG Laboratories/ Sports Facility/ Green Initiatives **excluding computers & its peripherals**	×	×	×	×	×	×	×
2.3	Minor Equipment under Nodal Cell	×	×	×	×	×	×	×
3	**Information Technology** (Computer Hardware/ Software)	×	×	×	×	×	×	×
3.1	Computer Hardware	×	×	×	×	×	×	×
3.2	Computer Software	×	×	×	×	×	×	×
4	**Library Books & Journals**	×	×	×	×	×	×	×
4.1	Print Book	×	×	×	×	×	×	×
4.2	Print Journal	×	×	×	×	×	×	×
4.3	e-Book other than CeRA	×	×	×	×	×	×	×
4.4	e-Journalother than CeRA	×	×	×	×	×	×	×
4.5	Digitization of Resources	×	×	×	×	×	×	×
5	**Vehicles & Vessels**	×	×	×	×	×	×	×
6	**Livestock**	×	×	×	×	×	×	×
7	**Furniture and Fixtures for**	×	×	×	×	×	×	×
7.1	Hostel	×	×	×	×	×	×	×
7.2	Examination Hall	×	×	×	×	×	×	×

SN	Components	Allocation of Grant	Main campus	F./Ag.	F./Hort.	F./Ag. Engg.	PG Faculty	Total of University
7.3	Laboratory	×	×	×	×	×	×	×
7.4	Class Room	×	×	×	×	×	×	×
7.5	Library	×	×	×	×	×	×	×
8	**Others**	×	×	×	×	×	×	×
	Total CAPITAL	×	×	×	×	×	×	×
B.	**Grant-in-Aid Salaries (REVENUE)**	×	×	×	×	×	×	×
C.	**Grant-in-Aid General (REVENUE)**	×	×	×	×	×	×	×
9	**Research & Operational Expenses**	×	×	×	×	×	×	×
9.1	**Research Expenses**	×	×	×	×	×	×	×
9.1.1	**Curriculum Development and Delivery**: Contingency grants for UG/PG Practical and preparation of Instructional Manuals	×	×	×	×	×	×	×
9.1.2	**Strengthening of UG/ PG Teaching:** Participation of Faculty/ Ph.D. students in Seminars/ Conferences/Trainings including Educational Tour within the country. In no case funding for foreign travel will be allowed.	×	×	×	×	×	×	×
9.1.3	**Support to DEAN**	×	×	×	×	×	×	×
9.2	**Operational Expenses**	×	×	×	×	×	×	×
9.2.1	**Student and Faculty Amenities**: Tutorials for SC/ST students; Students Counseling, Placement Cell; Health Facilities; Personality Development; Recreation facilities including Agri-Unifest & Agri-Sports	×	×	×	×	×	×	×
9.2.2	Best Teacher Award; Guest & Adjunct Faculty	×	×	×	×	×	×	×
9.2.3	Support to Nodal Cell	×	×	×	×	×	×	×
10	**Miscellaneous Expenses**	×	×	×	×	×	×	×
11	Others	×	×	×	×	×	×	×
12	**Publicity & Exhibitions**	×	×	×	×	×	×	×
	Total Grant in Aid-Capital	×	×	×	×	×	×	×
	Total Grant in Aid-Salary	×	×	×	×	×	×	×
	Total Grant in Aid-Revenue	×	×	×	×	×	×	×
	Grand Total: Grant in Aid (CAPITAL+ SALARY + REVENUE)	×	×	×	×	×	×	×

Demonstration of Agri-DRONE

Celebration of World AIDS Day

1

Farmers' awareness program by NICRA Project

Prizes bagged from 21st Agrifest, 2022