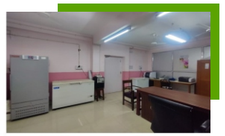

ANNUAL REPORT
2024-25

Bidhan Chandra Krishi Viswavidyalaya
Mohanpur, Dist.-Nadia, West Bengal, India, PIN-741252
Website: www.bckv.edu.in

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Published by:
Vice Chancellor,
Bidhan Chandra KrishiViswavidyalaya
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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 KrishiViswavidyalaya 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 my privilege to present the **Annual Report 2024-2025** of Bidhan Chandra Krishi Viswavidyalaya **(BCKV)**. The Report highlights the University's key academic, research, and extension achievements during the year, reflecting its sustained commitment to students, farmers, and societal development.*

During the year, BCKV strengthened its academic and research ecosystem through notable student and faculty accomplishments. The University awarded 90 doctoral degrees and recorded strong student progression to premier institutions in India and abroad, alongside successful placements across diverse professional sectors. Students secured over 22 ICAR–JRFs, 62 ASRB–NET qualifications, and multiple CSIR, UGC, and GATE fellowships, underscoring academic excellence and competitiveness.

Research productivity remained robust, evidenced by 281 NAAS-rated publications, including 23 with NAAS scores above 10, alongside 36 books and 64 book chapters. Significant technological outputs included the release and registration of new crop varieties, the Geographical Indication recognition of the aromatic rice variety Kalonunia, and registration of Radhatilak as a farmers' variety, contributing to agrobiodiversity conservation and farmer livelihoods. Advances in crop production and protection technologies reinforced the University's focus on sustainable and climate-resilient agriculture.

Research and outreach activities were strengthened through 30 AICRP/AINP projects, over 27 externally funded schemes, funded by ICAR, DST, BRNS, Govt. of India, IMD. (GOI), GOWB, NTPC, ISRO, MSME, Khadi & Village industries commission, GOI, Sufal Bangla, BARC, GOI etc. and 5 externally funded projects with support from CYMMIT, ICARDA, ACIAR, Indo-German S&T, International Atomic Energy Agency, and different research projects from various industrial sponsors. Extension services, delivered through five Krishi Vigyan Kendras and regional research stations, ensured effective technology dissemination across diverse agro-ecological zones of West Bengal.

The effective implementation of ICAR's Student READY programme enhanced field exposure, skill development, and entrepreneurial orientation among students. Recognition of the Central Library with the ICAR–CeRA Best Library Award for Eastern India, along with increased participation of women in academic, research, and cultural activities, reflects the University's inclusive and progressive academic environment.

I place on record my appreciation for the Chairman and members of the Annual Report Committee for their meticulous efforts. I gratefully acknowledge the continued support of the Government of West Bengal, the Indian Council of Agricultural Research, and all funding and sponsoring agencies, and I appreciate the leadership provided by the former Vice-Chancellor during the period covered.

Looking ahead, BCKV remains firmly committed to advancing agricultural education, research, and extension through knowledge-driven innovation, capacity building, and dedicated service to society.

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

Dr. Ashok K Patra
Vice Chancellor

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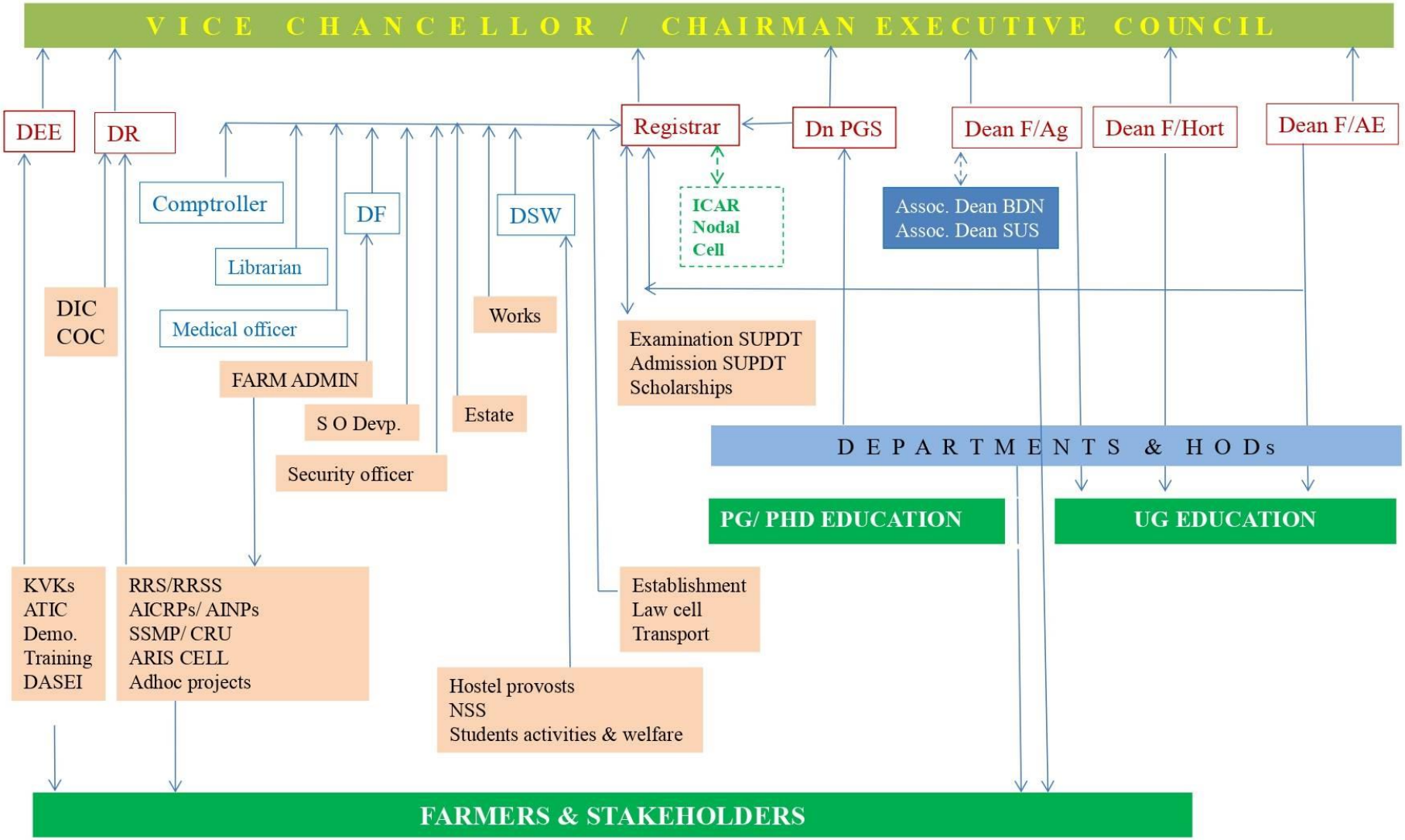

VICE CHANCELLOR / CHAIRMAN EXECUTIVE COUNCIL
DEE
DR
Registrar
Dn PGS
Dean F/Ag
Dean F/Hort
Dean F/AE
Comptroller
Librarian
DF
DSW
ICAR Nodal Cell
Assoc. Dean BDN
Assoc. Dean SUS
DIC
COC
Medical officer
FARM ADMIN
S O Devp.
Security officer
Estate
Works
Examination SUPDT
Admission SUPDT
Scholarships
DEPARTMENTS & 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

Bidhan Chandra Krishi Viswavidyalaya (BCKV) established on first September in the year 1974, is the oldest State Agricultural University of West Bengal catering courses in diverse disciplines of agriculture and its allied subjects leading to graduate and postgraduate degrees. It came into being as a faculty under Kalyani University in 1960 out of the State College of Agriculture. BCKV as a full-fledged State Agricultural University has completed five decades of its existence as the pioneer institute of agricultural education, research and extension since its establishment with Agriculture and Veterinary Science as the two constituent faculties. Later, the North Bengal campus of BCKV came into being in the district of Cooch Behar. Following the establishment of West Bengal University of Animal and Fishery Sciences (WBUAFS) in 1996 and Uttar Banga Krishi Viswavidyalaya (UBKV) in 2001 the Viswavidyalaya was left with three faculties, *viz.* Faculty of Agriculture, Faculty of Horticulture and Faculty of Agricultural Engineering, all at the main campus, Mohanpur. Two new colleges of Agriculture- one at Bardhaman since 2014 and the other at Bankura since 2015 started functioning, as extended campuses of the Viswavidyalaya.

During these 52 years, the Viswavidyalaya paid primary attention towards imparting education in different branches of study in Agriculture, Horticulture, Agricultural Engineering and other allied disciplines of learning. The Viswavidyalaya is committed to steer the state towards attaining sustainable food, nutritional, environmental and livelihood security through agricultural education, research and extension. The Viswavidyalaya is continuing research with a human face for evolving, nurturing and improvising technologies towards securing livelihood of farmers and supports the development of the state through increasing agricultural and agro-based industrial growth in a sustainable manner under changing climatic scenario.

FACULTY: AGRICULTURE

The Faculty of Agriculture consists of 16 departments: Agricultural Chemicals, Agricultural Economics, Agricultural Extension, Agricultural Meteorology and Physics, Agricultural Statistics, Agronomy, Agricultural Biochemistry, Agricultural Entomology, Genetics and Plant Breeding, Agricultural Biotechnology, Plant Pathology, Plant Physiology, Seed Science and Technology, Agricultural Chemistry and Soil Science, Soil and Water Conservation, and Animal Science. Over time, numerous high-quality laboratories have been established within the Faculty of Agriculture with financial assistance from various sources. However, resource constraints and shortages of skilled technical staff sometimes hinder the continuous operation of these laboratories after project funding expires. These facilities are utilized by students for practical classes and dissertation work during postgraduate studies. In alignment with the recommendations of the Indian Council of Agricultural Research (ICAR), the undergraduate syllabus has been periodically updated. However, to deliver these courses effectively, new facilities need to be developed, and existing facilities require upgrading. Immediate resources are essential for achieving these goals.

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 undergraduate, postgraduate, and doctoral courses and produces students with promising careers in the future, barring faculty constraints.

Achievements

During the academic year 2024-25, the department made significant contributions as

- The department was attached to the programme on “GI of aromatic rice of West Bengal” through the RKVY Programme. We are also investigating the biochemical and molecular basis for the mitigation of heat stress. Graduate students who have opted for this discipline as a specialization have been recognized by institutions of

repute in the country, securing positions in the national-level admission tests for Master's degrees, and eventually many of them could get PhD/post-doctoral fellowship positions in reputed international universities.

- The Department is still steadily pavingthe way towards a better understanding of agricultural science with the available resourcesand tools in biochemistry.
- The students who qualified the national-level examination, did their elective course inthis department, and were admitted to the apex institutes of India are as follows: Somsubhra Goswami - IIT Kharagpur, Rachayita Das- IIT Indore, Shreya Das - ICAR JRF (AIR-2, SC Category).

Department: Agricultural Biotechnology

The Department of Agricultural Biotechnology was established in the academic session 2013-14.

Achievements

During the academic year 2024-25, the department made significant contributions as

- One book chapter and eleven research papers have been published in different NAAS-ratedjournals, including one in the highest-ratedjournal (> 10).
- Additionally, three Ph.D. scholars, MoonmoonSarkar, Pratik Saha, and SayaniBandyopadhyay, successfully completed their doctoral research.
- Faculty members are actively engaged in collaborations with reputed research institutes.
- The department has made notable research advancements, including the molecular characterization of vermicompost-derived IAA-releasing bacterial isolates and their roles in enhancing banana root development.
- Another key achievement was the development of a rice transformation protocol that improves efficiency by incorporating pre-culture, washing, and pre-selection stages, thereby minimizing Agrobacterium overgrowth.
- In addition to research and teaching, faculty members actively contribute to academic and professional circles. They served as external expert members on the Boards of Studies for M.Sc. and B.Sc. programs in Agricultural Biotechnology at institutions such as the Ramakrishna Mission Vivekananda Educational and Research Institute (RKMVERI), Visva-Bharati, located inSantiniketan,the University ofKalyani in Kalyani, and MAKUT inHaringhata.
- *Publications*

Research papers with NAAS score during 2024				
< 5	5-7.5	7.5-10	> 10	Total
-	2	8	1	11
Book	Book chapter	Bulletin	Popular article	
-	1	-	-	1

Department: Agricultural Chemicals

The discipline of Agricultural Chemicals has existed since the 1970s under the then Department of Agricultural Chemistry and Soil Science, Faculty of Agriculture. The Department of Agricultural Chemicals was established in 2000 on the recommendation of the Government of West Bengal.

Achievements

During the academic year 2024-25, the department made significant contributions as follows:

- ICAR accredited UG, PG, and Ph.D. programs. The department successfully offered UG, PG, and Ph.D. programmes on the main campus at Mohanpur as well as onboth extended campuses.
- Student placement: Students are either engaged in higher studies or well-placed in different universities and institutions under the government and non-government sectors. sectors in various positions, such as Assistant Professor, Scientist, Food Safety Officer, Bank Officer, Livelihood Specialist, and more.
- Research publications: Published six research papers in various national and international journals in 2024.
- Institutional collaboration: The department-maintained collaboration with various Research Institutions, viz., Tea Research Association, Kolkata (Scientist: Dr. B. Kanrar) for doctoral research programme; and IIIT, Kalyani (Scientist: Dr. S. Pratihar) for research project.
- Selection committee expert: Prof. R. K. Kole, HoD for Assistant Professor (Agricultural Chemical), BAU; Dr. S. Roy for Research Officer, Young Professional-II and Project Fellow at Tocklai Tea Research Institute, Jorhat; and ICAR, CIFRI, Barrackpore.
- Expert opinion: Provided by Dr. D. K. Hazra on two patent-related issues for NatcoPharma Ltd.
- Invited speaker: Delivered by Dr. S. Roy in the "Analytical Workshop of Indian Pharmacological Society" at WBUAFS, Mohanpur; and Dr. D. K. Hazra at the Seminar on "Application of Nanotechnologies in Agriculture" at ATC, RKM Ashrama, Narendrapur.
- External Examiner: Dr. S. Roy for evaluation and viva-voce examination of Ph.D. thesis, Division of Agricultural Chemicals, ICAR: IARI, New Delhi; Dr. R. K. Kole for evaluation of M.Sc. thesis, Division of Agricultural Chemicals, ICAR: IARI, New Delhi.

Publications

Research papers with NAAS score during 2024					
Non-NAAS	< 5	5-7.5	7.5-10	> 10	Total
2		1	1	2	6
Book		Book chapter	Bulletin	Popular article	
-		-	-	-	




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, the Department offers 14 courses for the Master's degree and nine courses for the Ph.D. programme.

Achievements

During the academic year 2024-25, the department made significant contributions as follows:

- In the year 2024, 12 M.Sc. and 14 Ph. D. degrees were awarded.
- Maintaining the legacy of excellent teaching of the department, eight undergraduate students with specialization in the field of Soil Science (Physical Science) qualified the ICAR-JRF in 2024. One Ph. D student received UGC-NET-NFSC.
- Students' placement: Eleven students have been selected as Assistant Directors of Agriculture (ADA) in the Government of West Bengal.
- Two months of internship training on 'Production Techniques of Biofertilizers' in association with the SSMP project.
- Four months training on 'Soil Testing and Fertilizer Recommendation' to 10 unemployed youth through RIDF Project.
- Organized 'World Soil Day' at Mohanpur jointly with AICRP on STCR.
- Participation in the Krishi Mela organized by the university to showcase departmental activities.
- A novel chromotropic acid-based color development method was established for the rapid estimation of soil nitrate levels.

- Screening of different cultivars of commonly consumed food crops for their inheritability to accumulate Zn and Fe and to evaluate the variability present among their gene pools.
- Exploration of potential N-fixing strains of *Rhizobium*, *Azotobacter*, and P-solubilizingand K-mobilizing strains of *Bacillus* and *Pseudomonas* for the production of biofertilizers.

Publications

Research papers with NAAS score during 2024				
< 5	5-7.5	7.5-10	> 10	Total
1	11	17	4	33
Book	Book chapter	Bulletin	Popular article	
3	8	4	-	15




Department: Agricultural Economics

The Department of Agricultural Economics has been functioning as a full-fledged department since 1966 under the Faculty of Agriculture at Kalyani University and came under BCKV in 1974. The department imparts quality teaching to meet the academic needs of the undergraduate students of all three faculties. It has kept pace with the ever-changing needs of the academic situation of the country and also designed research programmes in the M.Sc. (Ag) and Ph. D. levels, keeping in view the emerging agrarian crisis of the country in general and the state in particular.

Achievements

During the academic year 2024-25, the department made significant contributions as

- Infrastructure development and resource utilization, such as online classrooms, seminar rooms, and well-furnished Head's chamber.

- Four seminars were organized in collaboration with the department of Agril Extension.
- Resource persons visited, like Prof. Kaustav Mishra, (Business Management), New York State University, USA (BCKV Alumni); Prof. Debapriyo Sen, (Economics),Toranto University, Canada; Prof. Rajat Acharya, (Economics) Jadavpur University; Prof. Minati Sen, (Food and Nutrition), Calcutta University.

Publications

Research papers with NAAS score during 2024					
Non NASS	< 5	5-7.5	7.5-10	> 10	Total
4	3	19	-	-	26
	Book	Book chapter	Bulletin	Popular article	
	-	2	-	-	2

Department: Agricultural Entomology

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

Achievements

During the academic year 2024-25, the department made significant contributions as

- Students' placements: 12 in public sector banks, Government of West Bengal (ADA), agricultural sector private companies, Universities and NGOs.
- Students passed out: M.Sc. – 18 and Ph.D. – 6.
- Sabyasachi Ray received the Best Oral Presentation Award conferred by the Indian Phytopathological Society during the IPS Eastern Zonal Meet and National Conference held at ICAR-National Rice Research Institute, Hazaribag, Jharkhand. Ms Ipsita Ghosh was awarded the Innovative Article Award – 2024, while Sucheta Roy secured AIR 16 in AIEEA-PG/JRF-2024 conducted by the Indian Council of Agricultural Research in Entomology and Nematology.
- Prof. A. K. Mukhopadhyay was appointed as Dean, Post Graduate Studies of Bidhan Chandra Krishi Viswavidyalaya on 17 December 2024 and assumed charge on 18

December 2024. Dr. Amitava Banerjee acted as Co-Chairman during the Krishi-O-Udyan Mela (Golden Jubilee Celebration of BCKV), participated in Expert Committee Meetings on Entomology courses at The Neotia University, and joined the Editorial Board of the Journal of Plant Health Archives in 2024. Dr. Pranab Debnath also received the Innovative Article Award – 2024 for the article titled "Kleptoparasitism: A Peculiar Behaviour Observed in Insects."

- The department implemented externally funded projects under Rashtriya Krishi Vikas Yojana and through collaborations with organizations such as Bayer, UPL, Corteva, Dhanuka Agritech Limited, FMC Corporation and Mahamaya Life Science Pvt. Ltd., mobilizing approximately ₹1.0 crore.
- Faculty members also actively contributed to agricultural extension activities as resource persons in programmes organized by Diploma in Agricultural Extension Services for Input Dealers (DAESI), Agricultural Technology Management Agency (ATMA), Krishi Vigyan Kendra (KVK), ATC and CADC.

Collaboration: UBKV, NDRF, and Air Force Station.

Publications

Research papers with NAAS score during 2024				
< 5	5-7.5	7.5-10	> 10	Total
6	28	1	-	35
Book	Book chapter	Bulletin	Popular article	
2	9	2	1	14

Department: Agricultural Extension

The Department of Agricultural Extension was established under the Faculty of Agriculture, Kalyani University, in 1962. In the year 1963, M. Sc. (Ag.)in Agricultural Extension was introduced. The department catersto graduate, postgraduate, and doctoral courses for students.

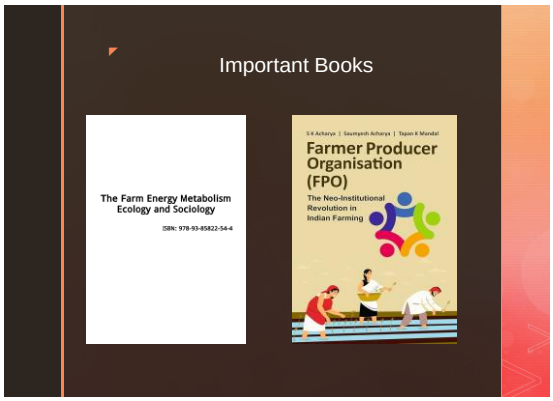
Achievements

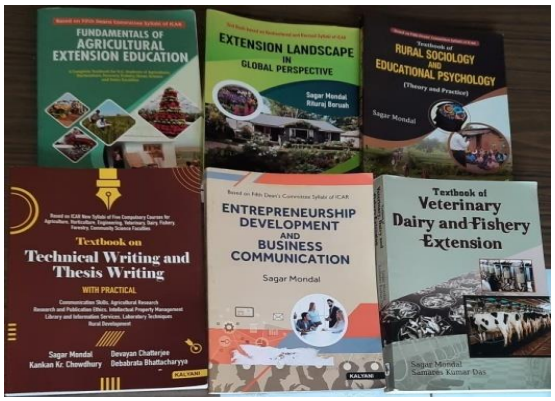
During the academic year 2024-25, the department made significant contributions as

- *Students' achievement*: Indo-German DAAD Fellowship by Dr Sneha Bera, Ph.D Scholar; Dr Riti Chatterjee: Visiting scholar at Ohio State University, Ph.D Scholar;Dr Anwesha Mondal: Visiting scholar at Cornell University, Ph.D Scholar
- *Organized lectures*: Four invited lectures in a row by different eminent personalities of extension and allied subjects.

Publication:

Research papers with NAAS score during 2024				
< 5	5-7.5	7.5-10	> 10	Total
0	7	0	1	8
Book	Book chapter	Bulletin	Popular article	
10				10





Department: Agricultural Meteorology and Physics

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

Achievements

During the academic year 2024, the department made significant contributions as:

- Three Ph.D. students joined as Asst. Professor at various University/Institute
- Two Ph.D students awarded UGC single girl child fellowship
- Three Ph.D students joined as Research Associate, Young professional and Agriculture Officer at different Govt. department/Institute

Publications

Research papers with NAAS score during 2024				
< 5	5-7.5	7.5-10	> 10	Total
-	10	7	-	17
Book	Book chapter	Bulletin	Popular article	
-	1	-	3	4

Department: Agricultural Statistics

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

Achievements

During the academic year 2024-25, the department made significant contributions as

Publications:

Research papers with NAAS score during 2024				
< 5	5-7.5	7.5-10	> 10	Total
2	4	3	-	9
Book	Book chapter	Bulletin	Popular article	
-	1	-	-	1

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 KrishiViswavidyalaya (BCKV) in 1974. The department offers undergraduate, postgraduate, and doctoral degree courses in agronomy.

Achievements

During the academic year 2024-25, the department made significant contributions, such as:

- Many students clearing in eligibility test in JRF, ICAR NET/ ICAR SRF. Sri Mainak Sarkar awarded with "Lightening talk" at ICAR- NRRI at Rice congress.
- Kalonunia, a traditional aromatic rice of the Terai region of West Bengal, received Geographical Indication (GI No. 743). Five traditional aromatic rice varieties Gobindabhog, Tulaipanji, Kalonunia, Kataribhog and Radhunipagal were included under AGMARK through the notification of 'Non-Basmati Aromatic Rice Grading and Marking Rules, 2024'.
- Awards, Recognitions and Fellowships : M. Ghosh was conferred with the Fellow of Rice Workers (2024) by ICAR-National Rice Research Institute. P. Bandopadhyay received the Fellow of Academy for Advancement of Agricultural Sciences Award (2024) from the Academy for Advancement of Agricultural Sciences. K. Murmu received the Young Scientist Award from Brainware University. R. Poddar received the COBACAS Young Scientist Award.

Publications:

Research papers with NAAS score during 2024				Total
< 5	5-7.5	7.5-10	> 10	
13	45	20	11	89
Book	Book chapter	Bulletin	Popular article	
11	20	45	13	89



Department: Animal Science

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

Achievements

During the academic year 2024-25, the department made significant contributions as:

- The Livestock Instructional Farm has been maintained for the production of Black Soldier, which may be considered a cheap source of protein for poultry and fish. A net house for adult flies, egg collection devices, a hatching unit, and a larval rearing unit were successfully developed.
- After initial setting up of different facilities, eggs of Black Soldier fly were procured from a nearby private farm. The rapid development of different stages of larvae, pupae, and adult flies, rapid multiplication to produce huge eggs, and recurrent cycles were maintained to produce Black Soldier fly larvae for low-cost broiler production.

Department: Genetics and Plant Breeding

Based on the recommendation of the ICAR-high power review team during the first accreditation of the 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

During the academic year 2024-25, the department made significant contributions as:

- Two CSIR-JRF and one DBT-SRF award have been conferred to scholars from this department. In the same year, ten undergraduate students from the Plant Science discipline qualified in the ICAR–PG examination.
- A new rice entry IET-29940 has been recommended for release in five states through the national evaluation system. Two elite *Stevia* mutant lines with higher steviol glycoside content and biomass completed multi-location trials under the AICRP-MAP&BV. The forage Lathyrus variety KL-5 (Bidhan Khesari-2) was notified and released by CVRC in March 2025 for cultivation in the NEPZ.
- The department developed a rapid method to identify crop genotypes with accelerated photoprotection recovery, reducing screening time to 5 minutes from over 45 minutes in existing protocols.

Publications:

Research papers with NAAS score during 2024				
< 5	5-7.5	7.5-10	> 10	Total
-	9	16	6	31
Book	Book chapter	Bulletin	Popular article	
2	9	2	-	13


Department: Plant Pathology

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

Achievements

During the academic year 2024-25, the department made significant contributions as

- Students Awards and Recognitions: Students received several awards including the Prof. M. J. Narasimhan Academic Merit Award (Ms. Amrita Dasgupta), Best Oral Presentation Awards (Mr. Rohan Das and Ms. Moumita Panda at IPSEZ Conference; Ms. Moumita Panda at IPS–AAS Conference), and Best Poster Presentation Award (Mr. Souvik Chhandogi).
- Faculty Achievements: Dr. J. Tarafdar received the A.P.J. Abdul Kalam Outstanding Researcher Award and the Dr. B. B. Mundkur Outstanding Plant Pathologist Award. Dr. S. Dutta was elected Fellow of the Indian Mycological Society, while Dr. S. Mahapatra became Fellow of the Indian Phytopathological Society and the Society for Advancement of Wheat and Barley Research. Dr. Poly Saha served as a member of the steering committee of the 5th International Conference in Dubai, and Dr. S. K. Ray and Dr. S. Debnath received best oral presentation awards at national and international conferences.
- Infrastructure Development: The department established plant virus and pathogen diagnostic centres for indexing planting materials and developed a mushroom spawn production and training laboratory**.**

Publications:

Research papers with NAAS score during 2024				
< 5	5-7.5	7.5-10	> 10	Total
7	27	10	2	46
Book	Book chapter	Bulletin	Popular article	
2	9	-	5	16

Plant virus and pathogen diagnostics laboratory

Department: Plant Physiology

The Department of Plant Physiology was established under the Faculty of Agriculture since 15th February 15, 1999, consequent upon the quadri-partitioning of the erstwhile Department of Genetics and Plant Breeding. Since its inception, the department has actively engaged in

catering a number of advanced courses on crop physiology at the Ph.D.levelin addition to the courses in the UG (both Agriculture and Horticulture faculties) and Master's degree levels.

Achievements

During the academic year 2024-25, the department made significant contributions as

- The Department of Plant Physiology was established under the Faculty of Agriculture since 15th February 15, 1999, consequent upon the quadri-partitioning of the erstwhile Department of Genetics and Plant Breeding.
- Since its inception, the department has actively engaged in catering a number of advanced courses on cropphysiology at the Ph.D. level in addition to the courses in the UG (both Agriculture and Horticulture faculties) and Master's degree levels.
- Publication: Research papers- 2, Book chapters-2.
- *Placement*: Two students appointed as Asst Professor in Agriculture Colleges

Publications:

Research papers with NAAS score during 2024				**Total**
< 5	5-7.5	7.5-10	> 10	
2	4	-	-	06
Book	Book chapter	Bulletin	Popular article	
-	2	-	-	02

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 newly createdfrom the Department of Genetics and Plant Breeding, which started functioning on February 06, 1999. This department successfully fulfilled the UG academic requirements of the College of Agriculture, Burdwan, and Bankura.

Achievements

During the academic year 2024-25, the department made significant contributions as

- Seminars/workshops attended: 2; farmer training: 5.

Publications:

Research papers with NAAS score during 2024				**Total**
< 5	5-7.5	7.5-10	> 10	
9	5	-	-	14
Book	Book chapter	Bulletin	Popular article	
2	-	-	-	2

Department: Soil and Water Conservation

The Department of Soil and Water Conservation was established in 1996. The department caters to teaching programsatthe UG, PG, and Ph.D. levels.

Achievements

During the academic year 2024-25, the department made significant contributions as:

- The department caters teaching programme in UG, PG and Ph.D. level. Courses comprisewatershed management, water resource planning, management of soil degradation, remote sensing and its application in soil and water conservation planning, biological aspects of soil conservation, etc.
- Evaluating jute agrotextiles as soil conditioner for vegetable and fruit production, water use efficiency under Entisol and Inceptisol soil in India.
- *Publications:*

Research papers with NAAS score during 2024				**Total**
< 5	5-7.5	7.5-10	> 10	
1	1	-	-	2



STUDENT READY PROGRAMMES

A. Rural and Agricultural Work Experience (RAWE)

RAWE programme for 7th semester students of B.Sc. (Hons.) Ag. for the year 2024-25 was started on September 25,2024, where 107 students from BCKV,Mohanpur campus,26 students from BCKV, Burdwan campus, and 23 students from BCKV, Susunia campus participated. The RAWE program was structured under three themes:

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

This year RAWE programme was scheduled forstudents to acquire various field-level practical knowledge in association with the farming community. The students were trained on different aspects of farming, such as socio-economic and agro-ecosystem analysis, diagnostic analysis of insects, diseases, and weeds, testing of soil and water qualities,farming system analysis, farm improvement planning,crop weather studies, and argo/rural enterprise studies, amongothers.After gaining experience in different agricultural activities in their respective agro-climatic zones,the RAWE students were attached to Regional Research Stations (Jhargram, Kawdwip, Raghunathpur, Sekhampur) and KVKs (Nadia)situated in different agro-climatic zones of West Bengal under the BCKV jurisdiction to gather field-based knowledge of the overall agricultural situation of the state. The performance of the students was evaluated in different phases based on each thematic area through presentations, discussions, and question-answering. The program ended with the submission of final reports by the students, following group discussions and a 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 a RAWE Coordinator, RAWE Advisor, and other teacher members nominated by the Dean, Faculty of Agriculture. For the academic session 2024-25 Prof. Dhananjaya Dutta, Department of Agronomy, was the Coordinator of the RAWE programme.

Students' interaction with farmers

RAWE students with Agro-dealers

Village Entrepreneur study

Farm household studies

RAWE evaluation

Glimpses of RAWE activities 2024-25

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 ICARduring 8th semester following the guidelines of 5th Dean Committee with an intention to develop professional manpower that can help in making farming a profitable venture. The ELP is an integrated learning system of skill and knowledge wherein students are trained for entrepreneurship development after completing their degree programme. The EL modules operate in business or skill development mode. Experiential Learning Units (ELUs), in business mode, are based on the concept of 'Earning by earning' by sharing 50% profit with the students. The following ELP modules were offered by the Faculty of Agriculture, Mohanpur during 2024-25.

1. ELP 451: Commercial production of bioagents and botanical pesticides

The ELP 451 module on 'Commercial Production of Bio-agents and Botanical pesticides' was conducted in skill mode under the supervision of Prof. B. N. Panja, Department of Plant Pathology,thirteen (13) students were trained under this ELP module. During this period, the students worked on the isolation and purification of bio-control agents (BCA) anddetermined their antagonistic potential. The students could develop knowledge in processing and extraction of plants for bioactive principles, development of Emulsifiable Concentrate (EC) and Talc based bio-formulation and quality control of EC, formulation.Through this ELP, the students were given a Hands-on Experience in Mass production of biofungicide*Trichoderma*spp. and production of botanical pesticide formulation from seeds of *Pachyrhizus erosus*.

Mass Production and talc based formulation of *Trichoderma* sp. (2024-25)

2. ELP 452 Commercial Seed Production

The ELP 452 module on 'Commercial Seed Production' was conducted in skill mode under the supervision of Dr. P. Chakraborty, Department of Seed Science and Technology with technical support from Prof. M. Pramanik, Department of Agronomy and Dr. H. Ali, Agril. Economics. Ten (10) students were trained under this ELP module. The students were trained inseed production techniques with quality maintenance, processing, and storageprograms. Seed marketing is also included through the distribution channel.

2. 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 using this ELP module. The students were trained in mushroom culture preparation, mushroom spawn preparation, and mushroom cultivation in the Mushroom House,as well as marketing.



Mushroom culture preparation and mushroom cultivation

3. 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 Sciences. Twenty-three students (23) were trained usingthe ELP module. The students were given 'Hands-on Experience" on soil and water sampling from the field, preservation of samples, chemical analysis of soil, plant, and water, as well as preparation of report. Studentsare exposed to the process of making Soil Health Card and recommendations made through thesecards.

4. 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 usingthe ELP module. The students were given "Hand-onExperience" rearing of honeybees, collection of honey, and management of honeybees during off period, packaging, and marketing of honey. During the ELP, students sell their products in the local market. Inaddition, the students were also exposed to hands-on experience in organic production technology of vegetables such asokra and baby corn.

5. ELP 456: Organic Production

The ELP 456 module on Organic Production was conducted in skill mode under the supervision of Prof. M. Pramanik, Department of Agronomy. Twenty-five (35) students were trained under this ELP module. The students were divided into six batches, and each batch was entrusted with various tasks, such as i) vermin feed preparation, vermicompost preparation, processing, and marketing of vermicompost; ii) production technology of Jibamrit, Panchagabya, Amritpani, Bijamrita, Nimastra, liquid FYM, plant-based liquid manure, biodung compost, etc.; and iii)organic production technology of vegetables, such as okra and babycornharvesting. The students also had experience marketing vermicompost and organically produced okra,cowpea, and baby corn.

6. 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 the skill mode. Thirty-five (35) students were trained under this ELP module. The students were given "Hand-on Experience"in rearing silkworms on mulberry leaves in controlled environments. The students were also taught about the different steps of cocoon processing, reeling, and dyeing.

7. 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 Sciences. The ELP module was conducted in the Sample Survey and Mass Production (SSMP) Unit of the University. Thirtyfive (35) students were trained under this ELP module. The students were given hands-on experience in the preparation of liquid culture media, sterilization of culture media for biofertilizer production,and mixing and packaging of biofertilizers of different species.

Preparation of liquid culture media

Sterilization of culture media

Mixing and packaging of biofertilizers

Sealing of biofertilizers in packets

Awards/Recognition/Fellowships 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] for securing admission to PG studies in ICAR institutes and SAUs, with 38 students securing national ranks. Additionally, one student each from Faculty of Horticulture and Faculty of Agricultural Engineering also achieved national rank in 2024-25

Table-1: Performance of students in AIEE, 2024

Name	Rank/ Category	Name	Rank/ Category
Agronomy		**Physical Science**	
1. Biraj Saha	GEN	20. Aniket Das	2 (SC-1)
2. Sudarshan Sarkar	GEN	21. Sk Sahabaj Ali	1 (GEN)
3. Argha Karmakar	126 (OBC-62)	22. Ranit Sarkar	GEN
4. Madhurima Das	40 (SC-1)	23. Pratysha Bhattacharya	GEN
5. Koushambi Kundu	13 (GEN)	24. Megha Barman	GEN
6. Ankita Sarkar	SC-31	25. Shrutarshee Kundu	GEN
Agril Economics		**Agril. Biotechnology**	
7. Debapriya Barman	GEN	26. Abhipreeti Sheet	112 (EWS-25)
8. Ashik	GEN	27. Snighdha Basu	241 (SC-10)
9. Rakshinda	GEN	**Plant Science**	
Agril. Entomology		28. Sanjana Banik	GEN
10. Sucheta Roy	16 (GEN)	29. Sanchayan Ghosh	GEN
11. Sristi Sarkar	OBC-47	30. Arkayan Chakraborty	GEN
12. Firdausi Sultana	GEN	31. Ushasi Ray	GEN
13. Pritha Mukherjee	97 (GEN)	32. Protayan Sarkar	GEN
14. Tumin Das	149 (SC)	33. Purvi Chakraborty	GEN
		34. Sandipan Das	GEN
Agricultural Statistics		35. Samit Sikder	GEN
15. Manojit Mandal	SC-1	36. Prakriti Roy	GEN
16. Srijani Patra	18 (GEN)	37. Sayantan Mallick	GEN
		38. Sinchan Chandra	GEN
Social Sciences		**Vegetable Science**	
17. Ashique Ahaned	90 (OBC-20)	39. Shilpa Mandal	
18. Alfazuddin Sahaji	72 (OBC-27)	**Agril Engineering**	
19. Indira Das	174 (SC-13)	40. Sujoy Mahata	

CUET PG Entrance test in 2024: 3 students qualified and admitted for M.Sc. degree programme at BHU, Varanasi, in the discipline of Plant Physiology (Burdwan campus), Plant Pathology (Anwesha Barman, Burdwan campus), and Agronomy (Arindam Sadhukhan, Bankura Campus).

List of successful candidates qualified and ranked in the AIEEA-Ph. D. / ICAR-SRF/ CSIR JRF for 2024-25 from Agriculture/Horticulture Faculty, BCKV

Sl. No.	Name	Subject	Institute/Fellowship
1.	Debnath Sarkar	Soil Science	IARI, UGC NET
2.	Sayantan Mandal	Soil Science	IARI-CRIJAF. ICARSRF
3.	Payel Bhanja	Bioinformatics	Bose Institute, Kolkata
4.	Nabkumar Bhunia	Vegetable Science	ICAR, SRF / (BCKV)
5.	Shilpa Mukherjee	Plant Biology and Biotechnology	DBT JRF/ (NIPGR)
6.	Argha Mandal	Environmental Science	UGC Net

List of successful candidates cracked for admission to Top Ranking Institute at Abroad for higher studies in 2024-25 from Agriculture Faculty, BCKV

Sl No.	Name	Subject	Institute	Country	Association
1.	Praneswar Ghosh	Soil Science	North Carolina State University, USA	USA	Graduate Teaching and Research Assistantship

Cocurricurricular Activities

Mr. Shouvik Gorai, Department of Genetics and Plant Breeding, received the best poster award at the 5th International Group Meeting on Climate-Proofing Cereal Agriculture: Strategies for Resilience and Sustainability.(**March 22-24,2024**)

Events/ Celebration of Days of National and University Level Significance

Krishi-O-Udyan Mela

As part of the Golden Jubilee Celebration of BCKV, Krishi-O-Udyan Mela was held on15-16 February, 2024, at the Mohanpur Campus of Bidhan Chandra Krishi Viswavidyalaya.Leading agricultural institutions, NGOs, corporates, and farmers have participated in the program.

The Eminent speakers like, Dr. S. K. Brahmachari, Former Registrar, BCKV; 1st Vice-Chancellor of UBKV, Prof. Susanta Chakravorty, Hon'ble Vice-Chancellor, Vidyasagar University, Prof. Siddhartha Sankar Saha, H.O.D., PG Department of Commerce, University of Calcutta and other dignitaries adsdressed on History and Genesis of BCKV. Prof. M.G. Som, Former Vice-Chancellor, delivered a lecture on the silver Jubilee of Faculty of Horticulture-its genesis and history. Prof. R. K. Ghosh, Former Dean, F/Agril Engineering. delivered a lecture on the silver Jubilee of Faculty of Agricultural Engineering - its genesis and history.Prof. S. K. Sanyal, Former Hon'ble VC delivered lecture on "Environment Friendly Soil Management in Indian Agriculture in the Context of Climate Change Effects."

Sl. No.	Events	Date
1.	Birthday Celebration of Dr. Bidhan Chandra Roy	1st July, 2024
2.	Independence Day Celebration	15th August, 2024
4.	51stUniversity Foundation Day & Teachers'day	5thSeptember, 2024
5.	Birthday celebration of Father of Nation, Mahatma	2nd October, 2024
6.	World Soil Day Celebration	5th December, 2024
7.	Birthday celebration of Netaji Subhas Chandra Bose	23rd January, 2025
8.	Republic Day Celebration	26th January, 2025

Details of visit/lectures delivered by Eminent Scientists

1. Prof. PV Vara Prasad from **Kansas State University, USA,** delivered an invited lecture on "Impact of climate change on productivity of crops and climate smart sustainable agricultural practices" at the D.R. Sarkar Memorial Hall, Faculty of Agriculture, BCKV, on **January 16, 2024**.

2. Dr. Asim Biswas, **University of Guelph, Canada**, delivered a lecture on "Information-driven sustainable soil management" on **15.03.24**.

College of Agriculture, Bardhaman

College of Agriculture, Bardhaman as an extended campus of Bidhan Chandra Krishi Viswavidyalaya was established in was 2014 at Burdwan (Bardhaman district) to fulfil the growing need in agricultural education and research. The college has good residential facilities with two Boys' Hostels, namely, *Bidhan Abaas* and *Vivek Abaas*, and one Girls' Hostel namely, *Maitree Abaas.* The campus has a Farm unit of 50 acres comprising of Medicinal and Aromatic Garden, Seasonal Crop Museum, Fruit Orchard, Field Practical unit and experimental plots for research purpose. The College has well developed laboratory facilities that include 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 equipped with advanced instruments like, Atomic Absorption Spectrophotometer (AAS), UV vis Spectrophotometer, Plant Canopy Analyzer and Nitrogen digestion distillation unit.

Achievements

- Six students from COA, Burdwan Campus achieved success in AIEEA PG (ICAR entrance test) and two students in BHU-PG Entrance Test with good national rank and took admission in reputed institutes like, IASRI, IARI, New Delhi, NRRI, Cuttack, PAU, Ludhiana, RPCAU (Samastipur), BHU, Varanasi and Visva Bharati.
- Dr. Jhuma Datta Copyright received Registration Number SW-19612/2024 dt.06.11.2024 on the work titled Detection of dust on green leaves using image processing by Poly Saha

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 Burdwan-I, Jamboni, Jhargram & Binpur Basatpur and Raipur villages of Krishnapur and Kantia villages of Jhargram. The RAWE prorgamme was conducted in three major theme areas namely, 'Socio-economic and agro-ecosystem analysis of villages (Theme-I)', 'Diagnostic analysis of insects, diseases, weeds, soil and water qualities (Theme-II)' and 'Studies on farming system analysis, crop weather, farm improvement plan and agro/rural enterprises (Theme-III)'. The PRA method was followed by involving the local communities in the process of assessing their own situations, identifying problems, and developing solutions. The performance of the students was evaluated phase wise on each thematic area through presentation, discussion and question-answering followed by a central viva voce examination conducted by the RAWE Coordinating Cell.

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 have 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, 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, Universityfoundation day, College foundation day, World Environment Day etc. The students also organize Quiz, rangoli, debate, cultural, sports and essay writing competition under NSS programmes

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

GLIMPES OF NSS ACTIVITIES

Swachh Bharat Pakhwara, 2024

Swachh Bharat Pakhwara, 2024

World Soil Day celebration, 2024

Netaji's Birthday celebration, 2024

National Youth Day, 2024

College of Agriculture, Bankura

The College of Agriculture was established in 2015 with an intake capacity of 32 students in each batch. The campus is situated at Susunia in the district of Bankura (23.19^0N and 86.57^0E) in the Red and Lateritic Zone of West Bengal. The college is fully residential with one Boys' Hostel (*Boshi Sen Abash*), one Girls' Hostel (*Jhumur Abash*), play-ground, instructional farm - all inside the college campus. The college has a well-maintained Farm unit where different seasonal crops are grown as teaching resource for practical classes of the students of different semesters. The College building has four Class rooms, two examination halls, one seminar hall, one library room, laboratories equipped with instruments like, BOD incubator, Laminar airflow cabinet, Cooling centrifuge, C-H-N-S analyzer, Atomic Absorption Spectrophotometer, Nitrogen cum protein analyzer, UV spectrophotometer etc.

Achievements

In this year also a significant no. of students from of CoA, Susunia have successfully qualified AIEE of ICAR, PG entertance examination. The details are mentioned in Table-1

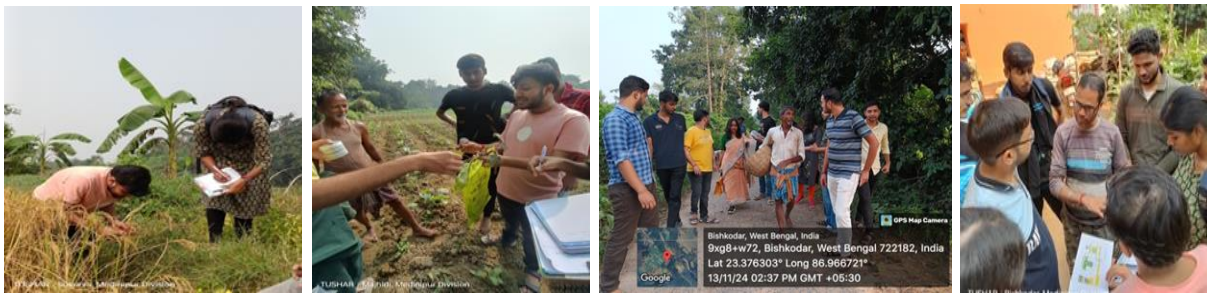
Student READY initiative

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

The Rural Agricultural Work Experience (RAWE) is a compulsory course offered in 7th Semester, B. Sc. (Hons.) Agriculture students primarily to understand the rural situations, status of Agricultural technologies adopted by farmers, prioritize the farmers' problems and to develop skills & attitude of working with farm families for all round development in rural area.

Total 23 students of 7th semester participated in the RAWE program during 2024-25 academic year. They have started their program in two separate village based on the availability of diverse cultivated crops, others resources and locational advantage. Among the 23 students, 12 belongs to Group A conducted their program in Parulia village, Jhunjka Gram Panchyet, Chhatna Block, Bankura and 11 belongs to Group B involved in Bishkodar village, Jhunjka Gram Panchyet, Chhatna Block, Bankura. All the students of RAWE programme have also participated in one month exposure visit at KVK, Gayeshpur, Nadia.

The students have developed their analytical skill, communication skill, observation skill, identification Skill, and problem-solving skills etc while working in their respective villages through the RAWE program.



Glimpse of RAWE activities of CoA, Susunia, 2024-25

EXPERIENTIAL LEARNING PROGRAMME (ELP)

Experiential Learning Program (ELP) is a compulsory course offered in 8th Semester, B.Sc. (Ag.) Hons., designed to develop enterprenuership among the students. Three ELPs namely, ELP-452 (Commercial Seed Production), ELP-456 (Organic Production) and ELP-453 (Mushroom Cultivation Technology) were offered at Bankura campus. Under ELP-452 the students worked on seed production of okra under the leadership of Dr. T. Biswas. Under ELP-453 the students worked on Oyster mushroom production and spawn preparation under the guidanc of Dr. Mrinmoy Mondal. The other group had hands-on experience on commercial seed production of black gram under the leadership of Dr. A. Hansda. Through the ELP modules the students of the final year primarily learned about project preparatoion, hands-on training and execution of of the project with an aim of income generation from the products and services which helped them to build their confidence to become future entrepreneurs.

Glimpse of ELP activities of CoA, Susunia, 2024-25

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.

Department: Fruit Science

A full-fledged department of Fruits and Orchard Management was created in 1996. Departmental research work (PG and Ph.D.) is mainly carried out at the Horticulture Research Station, Mondouri, on 20 fruit crops. The thrust areas are germplasm conservation and utilization and standardization of production technologies. Impetus to the research activities on different aspects of fruit crops was initiated with the establishment of two centers of the All India Coordinated Project, I.C.A.R. on Tropical fruits and Sub-tropical fruits, which later merged as one project.

Achievements

During the academic year 2024-25, the department made significant contributions as follows:

- Standardization of production technology for major tropical and subtropical fruit crops.
- Standardization of organic protocols for major fruit crop production.
- Molecular characterization of major fruit crops (mango, litchi, banana, guava, etc.) and minor fruit crops (jackfruit).
- Exploration of potential underutilized and neglected fruit crops.
- Baruipur guava - Department provided valuable inputs for getting GI and BCKV act as 3rd facilitator for this as GI No.-1062, Certificate No-686, date-31.03.25
- Sushobhan Bala, a farmer from Krishnagar, established a nursery enterprise after undergoing nursery training at the AICRP on Fruits, Mohanpur Centre, BCKV, which was subsequently recognized by ICAR."

- Mohanpur center (BCKV) was recognized as a National Active Germplasm Site (NAGS) for jackfruit in 2025 inNortheast India.
- Organizedthe 3rd Fruit Diversity Fair at BCKV, Mondouri on June 20, 2024, on behalf of ICAR-AICRP on Fruits.
- An industry partnership agreement was executed on May 9, 2024, between BCKV and M/S Greenco Chemicals for an operating partnership program on "Entrepreneurship and Agri-business at RIDF-23 (FBMC), Dharampur unit, North 24 Parganas, BCKV."
- Patent obtained**:** Fruit parameter designon Design No: 419836-001 date: 13/06/2024
- The Indo-German R&D Project, "Urban Cultivation with Re-usable Textile Growing Substrate (CirCulTex), funded by IGSTC, GoI, was conducted from 2020-21 to Dec 2024.
- The project on Fruit Based Cropping System for Promoting Food and Nutritional Security and Sustainable Livelihood of the Farming Community in the Paschimanchal districts of West Bengal, funded by RKVY, Government of West Bengal, was concluded in August 2024.
- A concept note on "Plantation of Fruit Crops for Mitigating Climate Change" has been approved by the Pollution Control Board, Government. of West Bengal.
- *Publication:*

Research papers with NAAS score during 2024				
< 5	5-7.5	7.5-10	> 10	Total
-	4	2	1	07
Book	Book chapter	Bulletin	Popular article	
1	2	-	-	03

Jackfruit for Vegetable Purpose, Department of Fruit Science

Department: Vegetable Science

The establishment of the Department of Vegetable Science in 1996 under the Faculty of Horticulture has brought about a paradigm shift in academic activities and research on vegetable crops with the establishment of well-equipped laboratory, polyhouse, net house, and field facilities. Several 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 programs.

Achievements

During the academic year 2024-25, the department made significant contributions as

- Lead Speaker (1), and Chairman of a session (1) in National Conference on "Climate Smart Agriculture: Innovation and Adoption for Sustainability" held from 20th to 22nd January, 2025 at Centurion University, Parlakhemundi, Odisha.
- Attended 28 Days Massive Open Online Course on Artificial Intelligence in Agriculture held during 1st -28th February'2025 organized by NAARM, Hyderabad.
- Prof. Arup Chattopadhyay acted as a Member of Task force committee formed by the PPV &FRA, Government of India. of India.
- Maintenance of different germplasm of tomato (72), brinjal (55), chilli (53), faba bean (50), sponge gourd (25)
- The department has implemented many capacity-buildingprograms for end users.
- A patent on Automated Compact Robot for Urban Vegetable Gardening" Design No. 422534-001 issued on 22/08/2024 by the Government. of India.
- A Patent has been approved by the Govt. of India on "Pollination Tracking AI Device" design in October, 2024
- Prof. Pranab Hazra conferred the Lifetime Achievement Award (2024) and acted as a member of the Quinquennial Review Team (QRT) for ICAR-IIVR (2024) and was selected as Executive Councillor, ISVS, Varanasi (2021-2024).
- Dr. Chandan Karak was awarded the 3rd Best Poster in the ISVS Golden Jubilee National Seminar (2024) held at Ayodhya, UP.
- Collaboration with National BARC, DAE, Govt. of India, ICAR-IIVR, Varanasi India, AVRDC, Taiwan, ICARDA, Lebanon and different Multinational Seed Companies for research and extension purposes

Publication:

Research papers with NAAS Score during 2024				
< 5	5-7.5	7.5-10	> 10	Total
3	19	5	-	27
Book	Book chapter	Bulletin	Popular article	
8	10	-	-	18

Standardization of grafting technique, in brinjal and tomato Dept. of Vegetable Science

Department: Floriculture and Landscape Architecture

Flowers are high-value crops used globally for social functions, essential oil production, dried flowers, foliage, and natural dye extraction. Their cultivation offers farmers higher incomes and better livelihood opportunities. In India, floriculture has gained significant attention over the past 15 years owing to rising per capita income and urbanization, which has driventhe increased demand for ornamentals. The Department of Floriculture and Landscape Architecture was established in September 1996 from the former Department of Horticulture. Research (PG and Ph.D.) is conducted mainly at the Horticulture Research Station, Mondouri, focusing on crops such as gerbera, chrysanthemum, rose, marigold, tuberose, orchids, and foliage plants.

Achievements

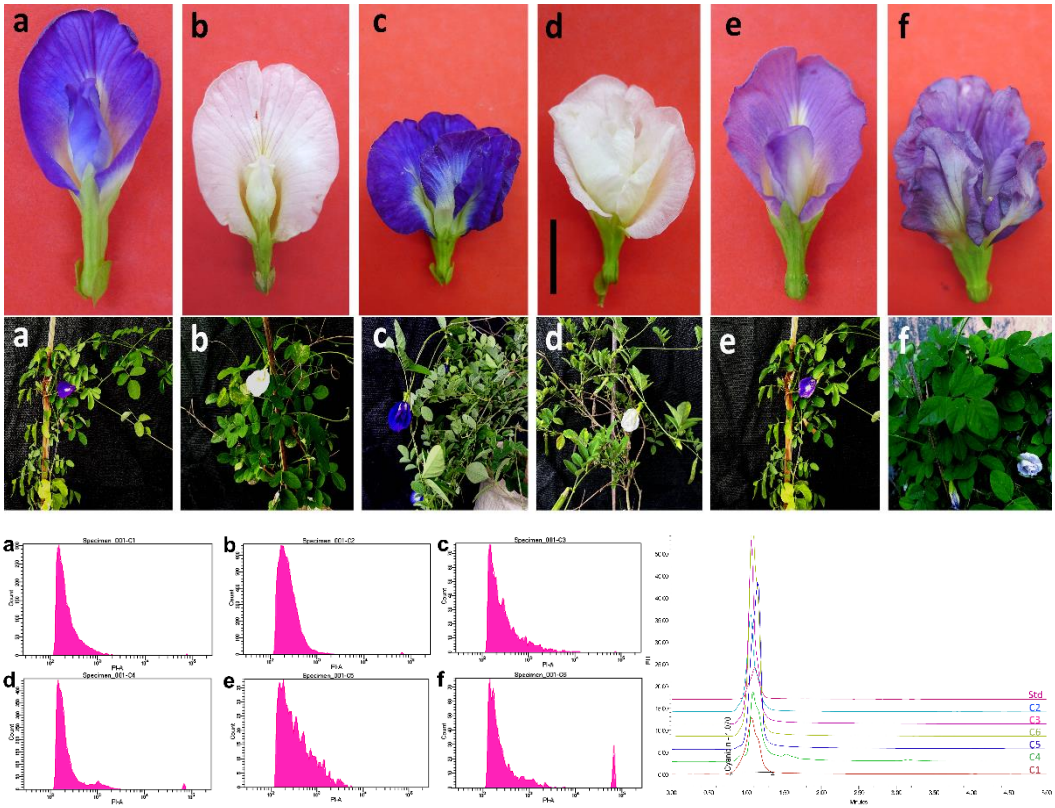
During the academic year 2024-25, the department made significant contributions as

- The department has conducted extensive research on hybrid tea roses, turf grasses, and tuberose.
- Focusing on extension for farmers to adopt cultivation of marigold, tuberose, rose, chrysanthemum, etc. in the eastern part of West Bengal and to earn more income.
- Project concluded on “Development of New Varieties through Hybridization and Mutation Breeding in Rajnigandha (*Polianthes tuberosa* L.)”, funded by: Dept. of Science & Technology and Biotechnology, Govt. of West Bengal
- One finished project funded by RKVY, Govt. of India on” Empowerment of Small and Marginal Farmers through Floricultural Technologies and Flower Waste Management” (2022-2025)
- One ongoing project funded by BARC, Mumbai, Govt. of India, entitled “Development of Novel Mutant(s) with Improved Lutein Content in African Marigold (*Tagetes erecta* L.) through Induced Mutagenesis Approach” (2024-2027).

- One Young ScientistAward (Dr. Jayoti Majumder Sarkar) by Academy for Advancement of Agricultural Sciences (AAAS) during national seminar "Advances in Innovative Technologies and Plant Health Management Strategies in Climate Resilient Agriculture" at College of Agriculture Tripura.
- Member of the EC, Society for the Promotion of Horticulture, ICAR-Indian Institute of Horticultural Research, Bengaluru (2024-2025).
- Germplasm conservation of rose, tuberose, hibiscus and clitoria
- Student (Meikam Ichancha) received the best PhD thesis award from the Indian Society of Ornamental Horticulture

Publication:

Research papers with NAAS Score during 2024				
< 5	5-7.5	7.5-10	> 10	Total
3	4	2	-	09
Book	Book chapter	Bulletin	Popular article	
1	2	-	-	3



Germplasm conservation of clitoria and selecting best germplasm for cyanidin content
Dept. of Floriculture and Landscape Architecture

Department: Post Harvest Technology

The Department of Post Harvest Technology, formerly known as the Department of Post Harvest management, was established in 1996. In addition to offering Master's and Ph.D. degree programmes, the department has implemented research projects funded by agencies such as BARC and Agriculture Marketing (Govt. of West Bengal), RKVY (Govt. of India) and international institutes such as ICARDA. The department is actively engaged in extension activities, particularly with rural women, promoting low-cost processing technologies and value addition to fruits, vegetables, and flowers. Technologies developed by the department have significantly contributed to enhancing postharvest management and rural livelihood opportunities.

Achievements

During the academic year 2024-25, the department made significant contributions as

- Patent: Three patents, *viz.*, Marigold based charcoal free incense sticks, Instrument for Extracting Water and Drying Ensilaged Marigold, and Process of Bag Ensilaging of Marigold flowers by Dr. Suhrita Chakraborty.
- Technology developed on herbal gulal, Incense sticks from marigold waste flower, solid state fermentation of marigold by Microbial consortia
- Experiential Learning Unit entitled 'Processing of fruits and vegetables for value addition' to facilitate the undergraduate students learning in real-life situations in the model processing plant.
- Providing hands on training to the stake holders
- Video documentation on postharvest management of fruit and flower

Publication:

Research papers with NAAS Score during 2024				
< 5	5-7.5	7.5-10	> 10	Total
-	2	-	-	02
Book	Book chapter	Bulletin	Popular article	
-	1	1	-	02

Fig. 4 Different processed products Dept. Post Harvest Technology

Department: Plantation, Spices, Medicinal and Aromatic Crops

Established in 1996 and later renamed, the Department of Plantation, Spices, Medicinal and Aromatic Crops has advanced research and academics in these sectors. With basic laboratory and field facilities, it has implemented several projects, including three AICRPs, and supports students from across departments in various academic programs.

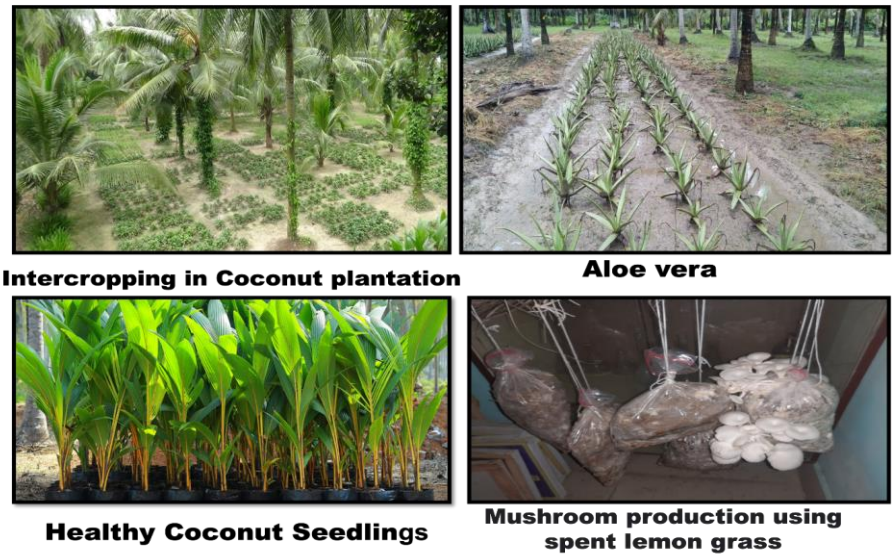
Achievements

During the academic year 2024-25, the department made significant contributions as follows:

- Conservation and characterization of medicinal and aromatic crops.
- Conservation of different germplasm of Aromatic and Medicinal Crops for research and demonstration.
- Year-round production of coriander leaves.
- Extraction of lemon grass oil for value addition
- ICAR-AICRP on cashew created the 'Indian Cashew App" in 10 languages to know the different aspects of cashew.
- Bidhan Jhargram 2 and Bidhan Bonsai kaju has been released from ICAR-AICRP on Cashew.
- for farming community.
- Prof. J.K.Hore served as a Member of Peer Review Team of NAEAB for the Accrediation of the Veer Chandra Singh Garhwati Uttarakhand University of Horticulture and Forestry, Bharsar, Pouri, Garhwati uttarkhand during 2024.

Publication:

Research papers with NAAS Score during 2024				
< 5	5-7.5	7.5-10	> 10	Total
4	2	2	-	08
Book	Book chapter	Bulletin	Popular article	
1	-	-	-	01



Different activities of Dept. Plantation, Spices, Medicinal and Aromatic crops

FACULTY OF AGRICULTURAL ENGINEERING

Faculty of Agricultural Engineering

Faculty of Agricultural Engineering with B. Tech. (Agricultural Engineering) programme 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 programme 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.

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 = 05 students
- ICAR-JRF (Junior Research Fellowship) qualified = 10 students
- Jobs through BCKV placement = 5 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). 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.

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	West Bengal Livestock Development Corporation Limited (Meat Plant at Haringhata and Feed Plant at Kalyani)
II	Biolab Organics,
III	Agri-Mech Division, Krishnanagar
IV	Faculty of Dairy Technology, WBUAFS
V	United Breweries Limited, Kalyani

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 and 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 of 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.

Soil Bin Set-up in Farm Machinery Testing Laboratory

Farm Machinery Training & Testing Institute, BCKV

Achievements

- A power tiller operated combined machine for harvesting followed by strip tilling and sowing was developed by a PhD scholar. Patent filing proces for this machine has been initiated.

Publication: Nil

Research papers with NAAS Score during 2024				
< 5	5-7.5	7.5-10	> 10	Total
-	-	-	-	-
Book	Book chapter	Bulletin	Popular article	

Department of Food Engineering

The department of Food Engineering covers wide range of areas like Thermodynamics, Transport Phenomena, Refrigeration, Air Conditioning and Cold Storage, Dairy and Food Processing, Food Plant Equipment Design, Food Packaging Technology etc. The department is engaged in teaching, research and extension activities to create skilled human resources for rapidly growing food processing and cold chain sectors.

The main mission of the department:

(i) To provide knowledge and skills for better preservation, processing and value addition to agro-products, with the aim of supporting the producers.

(ii) To promote research and development for product and process and assurance of optimum energy usage, high level of hygiene and safety of processed food.

(iii) Application of "Internet of Things "(IoT) in storage and packaging of agricultural produce.

Indoor Refrigeration Unit

Outdoor Solar Thermal Unit

Heat Pump Drying Unit in Food Engineering Lab

Achievements

- No. of M.Tech students awarded = 1

Publication: Nil

Research papers with NAAS Score during 2024				
< 5	5-7.5	7.5-10	> 10	Total
-	-	-	-	-
Book	Book chapter	Bulletin	Popular article	-

Department of Post Harvest Engineering

The department was established along with the Faculty of Agricultural Engineering, in the year1996. The mission of the department is to carry out three fold activities, eg., teaching, research and extension. 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. The 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.

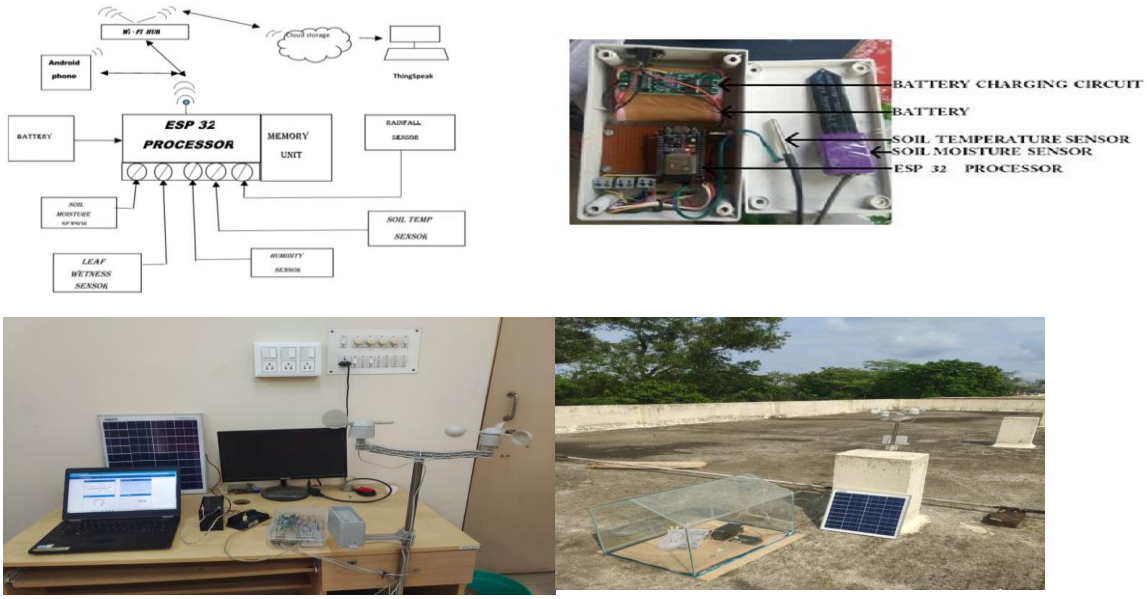
Achievements

- No. of M.Tech students awarded = 3
- Developed facilities (shade/ godowns) related to the RKVY project works at (a) Raiganj for installation of rice processing unit, (b). BCKV (Mohanpur) for installation of oil processing unit and (iii) Ranaghat for installation of pulse processing unit (dal mill) and rice processing unit.

Publication: Nil

Research papers with NAAS Score during 2024				
< 5	5-7.5	7.5-10	> 10	Total
-	-	-	-	-
Book	Book chapter	Bulletin	Popular article	-

Modern Rice Mill



IoT-Based Weather Monitoring System (Ag. Engineering Building)

Department of Soil and Water Engineering

The department of Soil and Water Engineering is mainly engaged in teaching under graduate and post graduate students (Ph.D). The UG program has stared in the year 1996 under the Faculty of Agricultural Engineering along with the degree programme of Ph.D (Soil and Water Engineering). M. Tech. degree programme (Soil and Water Engineering, SWE) started in the year 2011.

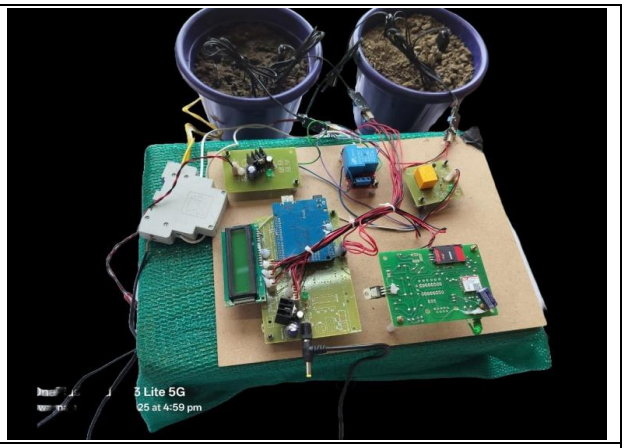
The department covers wide range of areas which includes surveying and levelling, surface and groundwater hydrology, wells and pumps, irrigation and drainage, design of micro irrigation systems, soil erosion and sediment transportation, soil and water conservation techniques etc.The department is engaged in teaching, research and extension activities to create skilled human resources for sustainable and efficient management of vulnerable natural resources like soil and water.

Research projects are assigned to the final year under graduate and postgraduate students as a part of their academic research work in order to expose them towards the various real-world problems, to make them more aware about the current research scenarios in this field and to involve them in hands on programme for better practical experience and knowledge. The department has laboratory facilities to provide practical knowledge to the students on surveying and leveling, soil mechanics, irrigation and drainage engineering, hydrology and fluid mechanics.

The department is engaged in

- Conducting research and development of Ground water and surface water management using remote sensing and GIS.
- Use of ANN in modeling and management of water resources.

- Design and development of micro-irrigation techniques for productive and sustainable management of water resources.
- Design and development IoT based automated drip irrigation system.

	
Soil and Water Engineering Laboratory	IoT based Automatic Irrigation Set-up

Directorate of Research

AINP on Agricultural Acarology

Since 1988, the project has been implemented at BCKV. Documentation of mite problems in horticultural crops, mass production and use of predatory mites, mastery of tarsonemid mite taxonomy, research into mite natural enemies, and standardization of prey and predatory mite mass production are the main mandates. The description of the main findingsis cited below.

- The existence of the mite population is strongly correlated with host phenology and the current weather, according to research on the population dynamics of the red spider mite of okra, garlic mite, and yellow mite of chilli.
- Standardized protocols for the long-term control of red spider mite in grapes and brinjal.
- Described five new species (*Amblyseius dahliae* sp. nov., *A. bengalensis* sp. nov., *A. brachycalyx* sp. nov., *A. conulus* sp. nov., *A. parbatabasii* sp. nov.), and two species [*Amblyseius largoensis* (Muma, 1955) and *A. herbicolus* (Chant, 1959) (Acari: Phytoseiidae)] were re-described from West Bengal, India
- Provided essential inputs to the farmers and conducted training programmes for ST farmers under the Tribal Sub-Plan (TSP).

Crop loss assessment due to sheath mite in rice

Field evaluations of garlic cultivars against garlic mite, *Aceria tulipae*

AICRP on Agroforestry

Since 1983, the project has operated at this university at RRS, Jhargram. The primary objectives are to identify plant species that complement agroforestry systems, optimize the tree crop mix, improve the performance of the most widely used agroforestry systems in the area, and modify current technologies to increase sustainability and productivity. The noteworthy achievements are described here.

- Identified superior germplasm of *Gmelina arborea* and *Acacia auriculiformis* for future breeding and agroforestry applications.
- Evaluated the impact of alley cropping and mulching on the early growth of *Gmelina-Ziziphus mauritiana* agroforestry system.
- Assessed growth and productivity of intercrops within *Neolamarckia cadamba*-mango, *Dysoxylum binectariferum*-mango, and *Melia dubia*-orange-based agroforestry systems. Studied the influence of tillage and alley cropping on weed composition and productivity in *Pterocarpus marsupium*-orange agroforestry system.
- Investigated the effects of selenium and ZnO nanoparticle seed priming on *Gmelina arborea* germination and early growth.
- Evaluated *Gmelina*-based agri-silvicultural systems across humid and sub-humid zones.
- On-station agroforestry models were maintained, including silvi and bamboo demonstration plots featuring species such as *Neolamarckia cadamba*, *Dysoxylum binectariferum*, *Eucalyptus*, *Acacia leptocarpa*, *Shorea robusta*, *Azadirachta indica*, *Pongamia pinnata*, and *Bambusa* spp.
- Fruit-based silvi plots included combinations like *Gmelina*-guava, *Sonajhuri*-sweet lime, and *Kadam*-mango, among others.
- On-farm trials, frontline demonstrations (FLDs), capacity-building programs, participation in fairs, and TV shows were conducted, engaging farmers, students, industry representatives, and extension personnel.

Discussion on importance on Agroforestry in TV show

AICRP on Agro-meteorology

In 1984–85, the AICRP on Agro-meteorology was established. In order to improve crop productivity and water use efficiency, the project's primary objectives are to ascertain how weather impacts pest and disease infestation of field crops, establish crop-weather relationships for the state's primary irrigated and rainfed crops in various agro-climatic regions, evaluate crop production potentials in various agro-climatic regions, and evaluate crop microclimate management options. The primary outcome of the project is described below.

- The agro-climatic analysis emphasized the consideration of both rainfall and evapotranspiration of all six agro-climatic zones of West Bengal. For this purpose, the potential ET was calculated and data on "Rainfall minus Potential Evapotranspiration" (R-PET) indicates the water surplus or water deficit. Analysis of data for last 30 years (from 1991 to 2020) indicates water surplus during May to September in the Hill and Terai zones, but lesser surplus or even deficit in the Old and New Alluvial and Red Lateritic zones. The drought and heat wave analysis were also done.
- In case of crop weather relationship, it was observed that optimum temperature for Kharif rice is found between 32-34 °C in this region. Delayed sowing indicated reduced filled grain per plant (by 10-15%). Emergence is relatively faster in the early sown green gram (by 3 to 5 days). Crop growth simulation model was used to observe the impact of climate change on growth and yield of Kharif rice. The maturity may be accelerated by 8-12 days during mid and end centauries in Old and New Alluvial Zones under moderate emission scenario. Under SSP5-8.5, an extreme projection scenario, 11-15 days and 9-10 days of advancements may be observed from old and new alluvial zones respectively to enter maturity phase by kharif rice. Coastal saline zone, which is detected with least changes in temperature, may be experience less reduction in growing period. The maturity phase may be shortened by 4-8 days in this location across different projection scenarios.
- Another significant achievement was the development of a DSS (Decision Support System) platform to forewarn stem borer attacks in Kharif rice based on weather data.

Agro-meteorological parameters taken in the experimental field

AICRP on Chickpea

In 2015, the project got underway at this university. Collecting, assessing, and conserving germplasm, as well as developing and validating production technologies and disseminating them via Front Line Demonstrations, are the primary objectives. The main findings are summarized below.

- Five years study carried out on organic and inorganic rice chickpea cropping system recommended that the mean yield of organic was 1563 kg/ha where in in-organic plot the chickpea yielded 1459 kg/ha. The maximum net return was recorded in chickpea (Rs 49303 /ha) in 100% FYM + foliar (Biophos + Biozinc) organic treatment whereas in 100% RDF + Foliar (DAP + $ZnSO_4$) treatment received return of Rs. 40157/ha in inorganic plot. The highest BCR was recorded 2.56 in organic plot whereas in organic plot it was 2.24.
- Performance of chickpea based cropping systems under natural farming recommended that the yield of chickpea in recommended practice was harvested satisfactory compare to the organic and natural farming plot. The maximum yield was recorded in recommended practice (1620 kg/ha) followed by natural farming (1564 kg/ha).

Technology developed on ZTD chickpea under rice fallow

AICRP on Cashew

The AICRP on cashew was initiated in 1984. The project's objectives include germplasm collection, selection, conservation, and hybridization, biotic and abiotic stress research, cultivar evaluation across many sites using various management techniques. The key findings are given below.

- Accredited cashew nursery under Directorate of Cashew and Cocoa Development, Ministry of Agriculture and Farmers Welfare, Kochi, Kerala.
- Extended germplasm block with 14 germplasm (4 primary and 10 secondary).
- Organized district level seminar on cashew on 18.03.25 at RRS, BCKV, Jhargram sponsored by Directorate of Cashew and Cocoa Development, Ministry of Agriculture and Farmers Welfare, Kochi, Kerala.
- Organized many training programmes for the tribal and scheduled caste farmers.

Released calendar of operation on cashew and conducted trainings by AICRP on Cashew

AICRP on Fruits

In 2014, the project got underway at this university. The primary goals include collection, characterization, and in-situ conservation of germplasm; assessing and selecting appropriate cultivars; standardizing root stocks; creating appropriate agro-techniques; and creating plant protection modules for papaya, avocado, guava, banana, mango, litchi, jackfruit, and papaya. Below is a summary of the noteworthy results.

- More than 400 tropical and subtropical fruit crop germplasm, including mango, banana, litchi, jackfruit, papaya, avocado, guava, and papaya, as well as certain underutilized fruit crops, were maintained, characterized and evaluated at the center.
- The centre has established net house, poly house and plant propagation unit, within the premises of fruit research station, Mondouri.
- In the experimental field, some ICAR-AICRP-recommended avocado varieties were planted and evaluated in response to the introduction of a new crop.
- The centre has developed protocols for effective management of thrips, mango hoppers, and banana leaf spot infections. The ICAR-AICRP fruit experts have approved the use of slow release pheromones to control fruit flies in guava and mango, which will benefit the state's farming community.
- Conducted numerous FLDs, arranged numerous training sessions on fruit crop production, protection, and value addition for SC and ST farmers, inputs dealers and supplied them with necessary inputs. WhatsApp, mobile devices, and other platforms were frequently used to consult farmers.

Different activities of AICRP on Fruits

AICRP on Floriculture

In 1977, the project was established at this university. Conserving and evaluating genetic resources, breeding new cultivars, standardizing agro-technological practices, putting plant protection plans into action, and creating value-added post-harvest technologies are the main goals of the project. Some key findings are summarized below.

- Collected and evaluated various new germplasm of different flower crops such as Gladiolus, tuberose, gerbera, marigold, ornamental kale, aster, spider lily and lotus.
- Developed many breeding lines in different crops such as gladiolus (Bidhan Glad.-1), chrysanthemum (Bidhan Sweeta and Bidhan 55/59), tuberose (BRH-26), gerbera (Bidhan Gerbera-1) for national evaluation in AICRP on Floriculture.
- The centre has submitted five proposals to the ICAR-DFR, Pune for release of varieties namely, tuberose (Bidhan Supreme, Bidhan Pearl, Bidhan Star) and chrysanthemum (Bidhan Manasi and Bidhan Chitra).
- Standardized potting mixture consisting of agricultural waste with ground nut shell + cocopeat + perlite (33.3:33.3:33.3) or rice husk + cocopeat + perlite (33.3:33.3:33.3) found to be the best for growth and flowering of chrysanthemum.
- Standardization of pre harvest sprays of plant growth substances to improve post harvest keeping quality of chrysanthemum, gladiolus, tuberose and rose were conducted successfully. Among different chemicals used sodium nitroprusside (SNP, No donor) at 50 $mg.l^{-1}$ was found to be extremely promising for tuberose and other crops related to better storage and subsequent vase life. For modified atmosphere packaging of rose celite-permanganate at 2 g sachet per pack was found to be highly effective for increasing storage and shelf life of rose var. Matt God.

- Conducted many training programmes for the farmers, input traders, and KPS by the centre

Two new varieties of chrysanthemum, Bidhan Chitra and Bidhan Manasi

Three new varieties of tuberose, Bidhan Pearl, Bidhan Supreme and Bidhan Star

AICRP on Forage Crops and Utilization

The project was carried out at BCKV since 1971. The project aims to produce rice bean and coix nucleus and breeder seeds, find and define neglected or unknown plant species, evaluate, conserve, and improve fodder germplasm, and provide a location-specific package of practices.

- A rice bean germplasm block with 250 genotypes and a 2000 m² "Golden Jubilee Forage Garden" have been established under the project.
- Application of 75 % recommended dose of N (75 kg N. ha^{-1}) along with 40:30 PK Kg. ha^{-1} + Nano @ 6ml.$litre^{-1}$ of water at 25 and 45 days after sowing was found effective than 100 per cent recommended nitrogen (100 kg. ha^{-1}) through chemical fertilizers for single cut fodder oat in West Bengal. This technology has the potential to produce higher green forage productivity as well as net monetary returns with higher B:C ratio.
- The recommended dose of fertilizer (N, P_2O_5, K_2O @ 20, 40, 40 kg ha^{-1}) integrated with foliar application of Panchagavya @ 3% (30 $g.l^{-1}$ of water) at 40, 65 DAS (after cutting) and at 50% flowering stages, respectively was found effective for lathyrus production. It has potential to produced highest green forage yield (160.8 q. ha^{-1}), dry matter yield (36.1q. ha^{-1}) and crude protein yield (6. 37q.ha^{-1}) as well as highest seed yield (1695 kg. ha^{-1}). It has highest net return of Rs. 65,952/-per ha with B: C ratio of 3.30.
- The center has organized many capacity-building activities and given tribal farmers high-quality planting materials and other necessary inputs as part of the TSP program.

Different activities of AICRP on Forage Crops

AICRP on Groundnut

The project began initially at RRS, Jhargram, in 1994 and now being shifted at Kalyani. Creating new agricultural production technologies, assessing, identifying, and hybridizing situation-specific short-duration cultivars and breeding lines with exceptional yields, and building resilience to biotic and abiotic stresses are among the objectives of the project. The key achievements are summarized as follows.

- A total of 21 spanish groundnut genotypes during summer season while 47 spanish types along with 12 virginia genotypes of groundnut has been evaluated during kharif season and some of the promising entries have also been identified under West Bengal condition.
- Standardized protocols for nutrient management, microbial inoculation and weed management and all recommendations have also been documented under West Bengal condition.
- Total 300 numbers of FLDs (Front Line Demonstrations) on groundnut cultivation has been conducted in the farmer's field covering 50 hectare of land to transfer the improved technologies. Apart from this farmer's training and awareness program has also been conducted for technological dissemination on improve groundnut cultivation under West Bengal situation.
- Field survey program on agronomic practices in groundnut cultivation has been conducted. In addition field demonstrations, farmers' orientation programs, capacity building, input distribution on groundnut cultivation have also been executed, where 200 numbers of farmers has been directly benefitted by the SCSP programme.

Frontline demonstration and weed management trial conducted by AICRP on Groundnut

AICRP on Integrated Farming Systems

The All India Coordinated Agronomic Research Project (AICRP on Integrated Farming Systems) formally started operations in 1968. It was renamed the AICRP on Integrated Cropping Systems in 2009–2010. Since 1990, the AICRP-IFS Project's main office has been located at Central Research Farm in Gayeshpur. The on-station and on-farm trials of the project are presently functioning in Bankura-1 and Chhatna Blocks, as well as the New Alluvial Zone, West Bengal.

- In sustainable resource management for climate smart IFS, the important findings were as follows.
  - Synthesized IFS Model recorded net return of Rs. 165999/- and generated employment of 337 man days. During this year, crop component recorded highest gross return (43.44%), while livestockunit registered highest net return (28.72 %) from the Model closely followed by cropping system (28.60). Inputs purchased from outside and inputs recycled within the system were 25.12% and 43.14%, respectively; while farm labour engaged accounted for 31.74% out of total cost of production (Rs. 189978.30). The biogas unit of 2 cubic meter capacity generated biogas equivalent to 145 kg LPG (12 domestic gas cylinders). There was a net negative balance of GHGs emission in the On-station IFS model (0.66 ha) in which livestock contributed maximum (70.48%) followed by cropping systems (21.62 %). Agro-forestry contributed maximum percentage (72.04 %) to the sink followed by biomass/compost (27.96%) for small and marginal farmers.
- For identification of cropping systems module for different farming systems, the following recommendations emerged out.
  - Potato yielded maximum followed by brinjal intercropped with coriander.
  - Berseem and oat gave significant higher yield cultivated as fodder for livestock.
  - Maize and cowpea gave higher yield in summer season.
  - Elephant foot yam followed by brinjal and coriander exhibited the highest system REY and return-cost ratio followed by pointed gourd – cauliflower – pointed Gourd.
- Under on-farm evaluation of management practices in pre-dominant cropping systems, the key findings are summarized below.
  - There was a significant difference in grain yield of *kharif* paddy between higher and lower productive block where highest grain yield was obtained for ICM followed by RDF statistically at par but have significant differences over other treatments
  - ICM and RDF have shown the highest *rabi* paddy yield with significant differences among other treatments.
  - SREY has shown its variability over locations in Bankura for paddy-mustard sequence of farming with highest economic return.

- Natural Farming and Organic Farming trials exhibited poor return-cost ratio.

➢ Under diversification and improvement of existing farming systems under small and marginal household conditions, the following outcomes emerged out.

- Following the intervention, there was a 124.46% increase in SREY under the Crop + Goatery + Poultry farming system compared to the benchmark, followed by changes of 78.90% in Crop + Dairy + Poultry, 62.92% in Crop + Dairy + Goatery, and the least amount of change in Crop + Dairy + Goatery + Fishery (9.47%).
- Maximum change in net return was observed in Crop + Goatery +Poultry (864%), followed by Crop +Dairy + Goatery (855%), Crop + Dairy + Poultry (437%) and Crop + Dairy + Goatery + Fishery (131%)

➢ Conducted trainings under SCSP programme and provided them critical inputs based on their needs in order to increase farm output and revenue.

Different IFS models adopted by AICRP on Integrated Farming Systems

AICRP on Irrigation Water Management

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

- Intercropping of Maize + Groundnut cultivation along with ET0 at 1.0 was found suitable for higher system productivity, water productivity and economics
- Observed World Water day
- Conducted many training programmes for the farmers.

Field demonstration of AICRP on Irrigation Water Management

AINP on Jute and Allied Fibres

The project started operations at BCKV in 1974 with the goals of standardizing INM, IWM, and drought management practices, conducting adaptation research, maintaining, characterizing, and screening germplasm to boost fiber yield through breeding efforts, and carrying out varietal evaluation trials. The key achievements are summarized below.

- Fifty germplasm were characterized under both white jute and tossa jute where 5 lines under white jute (≥8.0g/plant) and 2 lines (≥ 11.0g/plant) under tossa jute were found promising as compared to the checks.
- Fifty-six crosses in white jute and 110 crosses in tossa jute were made and evaluated for different criteria like yield, fibre quality and disease resistance.
- Three new entries were nominated under coordinated trials and 4 breeding lines were evaluated under IVT during this year.
- Under IWM, post-emergence spray of Quizalofop ethyl 10% EC @ 38 g.ha^{-1} at 15 DAE + one hand weeding (HW) at 30 DAS, was found effective. In CA, yield improvement for Jute under conventional tillage with rice crop residue treated plots was observed. However application of *Crotolaria* sp. (Sunnhemp @ 3t.ha^{-1}) gave the best result in rice.
- In outreach programme, 110 farmers participated with 18.5 ha area in Nadia and North 24 Parganas. Four demonstrations trials and 9 training programmes were conducted.

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

AICRP on Maize

The project started functioning at this university since 2015 with a goal of standardizing INM and IWM, conducting adaptation research, screening germplasm against biotic stresses, conducting varietal evaluation trials, and boosting maize productivity through breeding. The key observations are summarized below.

- A total of 1800 germplasm were screened against BLSB and MLB of maize under Consortium Research Project on Agro-biodiversity and some promising entries were identified. Lout of which 2 entries of normal maize was found resistant. Gene bank accession number was taken for 50 fungal cultures.
- Identified some corn varieties (Baby corn-1; Sweet corn-5) suitable for West Bengal.
- 1250 farmers benefited from the center's outreach initiative, which covered 300 hectares of maize.
- 1050 farmers benefited from twelve farmers' training programs.
- Under crop residue management, residue incorporation of previous crop in maize with spraying of microbial consortium on residue gave higher yield and B:C ratio in maize.
- Under baby corn based intensive cropping system, continuous baby corn with organic manure (15-ton FYM) + RDF gave higher productivity and B:C ratio of baby corn.

Different activities of AICRP on maize

AINP on Medicinal and Aromatic Crops and Betel vine

The AINP on betel vine started working at BCKV in 1984. AINP on medicinal and aromatic plants and AINP on betel vine were later combined in the XIth plan. Collecting, preserving, evaluating, and cataloging germplasm; determining the condition of pests and diseases; establishing IPM modules; and producing commercially viable agricultural techniques are among the project's goals. The salient findings are summarized below.

- A total of 54 cultivars comprising of bangla type (38 nos.), sanchi type (4 nos.), kapoori type (11 nos.), and meetha type (1 Nos.) along with 20 hybrids were being maintained at this center.
- Standardized protocols for integrated management of foliar diseases of kalmegh.

- Planting of ekangi in the month of April (15^{th}-30^{th}) at spacing 20 cm × 20 cm was recommended for maximum rhizomes yield (13.30 $t.ha^{-1}$) and oil yield (136.65 $kg.ha^{-1}$).
- Conducted several farmers' training programs, providing over 100 farmers with organic manures, minor implements, and medicinal and aromatic plant saplings for betel vine cultivation.

Field evaluation of betel vine and ekangi by AINP on Medicinal and Aromatic Crops and Betel vine

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

This voluntary centre was established at BCKV in 2009. A well-equipped laboratory has been set up in the main campus of BCKV, Mohanpur.

- **Remediation of arsenic contaminated soil using different amendments**

  Rice poses a major risk of arsenic (As) toxicity, requiring mitigation through soil amendments, with the most effective treatment being iron sulphate (FS) (30 kg ha^{-1}) combined with calcium silicate (CS), FYM, and vermicompost (VC), reducing As transfer by 72%, while FS with CS and VC achieved a 65% reduction, making FS with FYM or VC the best mitigation options.

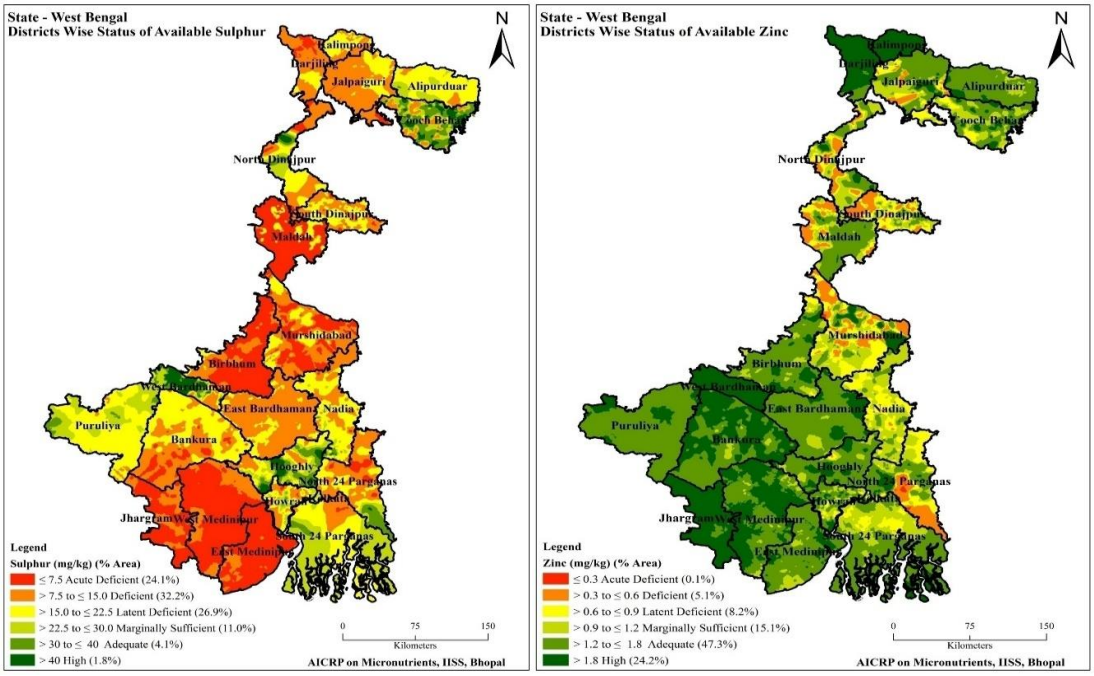
- **Studies on reduction of fluoride loading in rice with different management practices**

  Evaluating irrigation techniques, P fertilizer doses, and FYM applications showed that alternate wetting and drying with DAP (40 kg ha^{-1}) + FYM (5 t ha^{-1}) reduced fluoride content by 24.8% (soil), 26.7% (root), 14.4% (shoot), and 48.3% (grains), effectively minimizing fluoride uptake in rice and enhancing yield, making it a recommended practice for fluoride-affected areas.

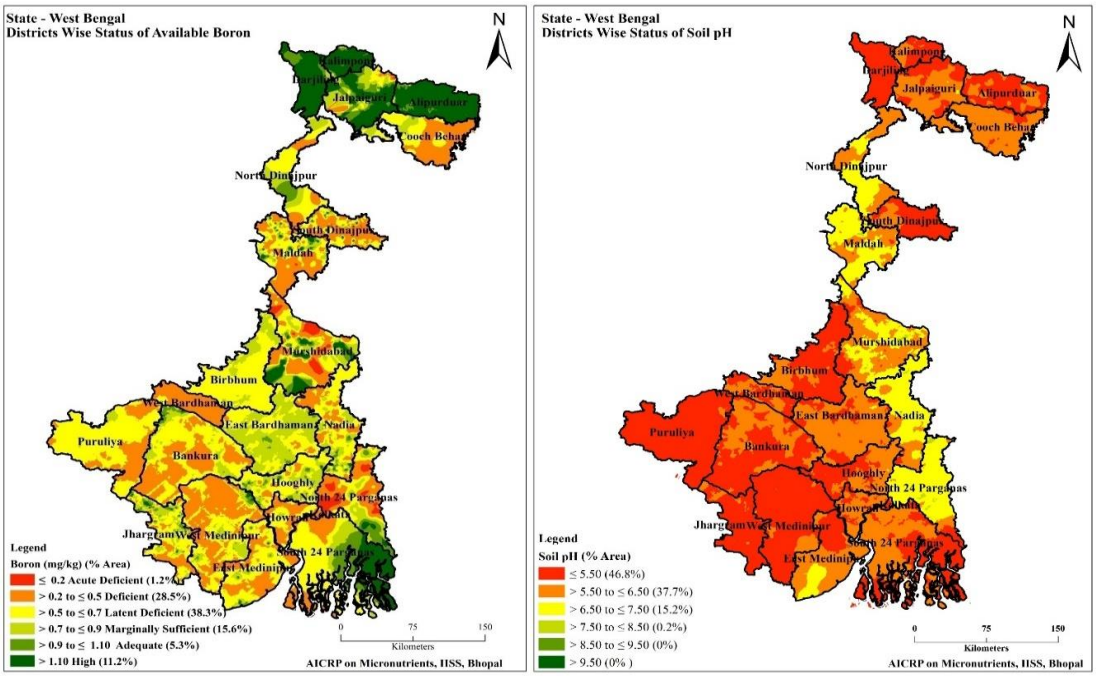
- **Amelioration of fluoride toxicity by different amendments**

  The combined application of dolomite (2 t ha^{-1}) and calcium silicate (5 q ha^{-1}) reduced soil fluoride availability by 43.3%, while calcium silicate alone (22.5%) being more effective than dolomite (18.6%) in lowering fluoride in plant parts.

- Two Atlases (both in English and Bengali language) entitled "**District wise atlas of available micronutrients and sulphur status in soils of West Bengal**" were published highlighting the micronutrient research in West Bengal which have given an insight view about the importance of micronutrients for sustaining the crop production.



Soil fertility map showing sulphur (S) and zinc (Zn) status in different districts of West Bengal



Soil fertility map showing boron (B) and pH status in different districts of West Bengal

AICRP on MULLARP (Mung bean, Urd bean, Lentil, Lathyrus, Rajmash and Pea)

The AICRP on MULLaRP has been started in this university since 2015. Key findings are summarized below.

- Maintained wide array of germplasm and breeding lines including 230 of mungbean, 114 of urdbean, 1200 of lentil and 277 of lathyrus.
- The centre submitted 07 mung bean entries, 04 urd bean entries, 05 lentil entries and 02 grass pea entries for their evaluation under the aegis of AICRP on MULLaRP.
- Mung bean entry BCM-20-55 has been promoted to AVT-II at NEPZ with yield potential of 1172 kg/ ha. This entry showed 6.55% superiority over Virat at this zone.
- Mung bean entry BCM-20-74 has been promoted to AVT-I at NEPZ with yield potential of 1216 kg/ha. This entry showed 13.53% superiority over Virat at this zone.
- Mung bean entry BCM-20-73, BCM-20-45 exhibited multiple disease resistance against MYMV, web blight, bacterial leaf spot etc.
- Urd bean entry BCU 20-37 showed resistance response against MYMV, CLS and Leaf curl disease.
- Mung bean genotypes Pant Mung 6, VGG 17-048 and VGG 18-002 have been identified to be resistant and are recommended as resistant donors against flower thrips. Likewise, based on the lower population of whitefly over a period of three years, urd bean entries Pusa B 27, SUG 1191 and KPU 18-2 have been identified to be resistant and are recommended as resistant donors against whitefly.
- The IPM module comprising of a) Seed treatment with Tebuconazole + Trifloxystrobin, thiamethoxam and Rhizobium inoculation b) Growing of millet crop in one row around the field as barrier crop c) Monitoring with yellow sticky trap d) Monitoring of *Helicoverpa* from flowering initiation stage with pheromone traps e) Spraying of neem based insecticides at 30 days after sowing f) Need based application of either Diafenthiuron or Pyriproxyfen for sucking insect pests and Chlorantarniliprole for pod borer complex resulted in lower pest population and higher grain yield, net returns and cost-benefit ratio in mungbean and urd bean.
- Conducted many Farmers' training programme for SC farmers.

Farmers' training and displaying stall by AICRP on MULLARP

AICRP on Nematodes in Agriculture

The project has been implemented at BCKV since 1988. The key findings are summarized below.

- Survey of plant parasitic nematodes was conducted in the blocks Hura, Puncha and Manbazar-I of Purulia district on rice and some vegetables (okra, pointed gourd) and most of the economically important nematodes were found in the samples collected.
- On the basis of survey conducted in the deep-water rice growing areas of Bhagawanpur-I, Sabang, Pingla and Debra block of East Midnapur district of West Bengal, no infestation of *Ditylenchus angustus* was found in the field.
- Nursery bed treatment with Biofor pf-2 @ 20 g.m-^{2} recorded significantly lowest root knot index (1.55) in rice. With regard to final nematode population in main field at the time of harvest, the maximum percentage decrease in population in 200 cc soil and 5g root (35.42 % and 44.40 % respectively) over control were recorded in the above treatment with maximum percentage yield increase over control (40.26 %) in rice.
- Screening result of 8 okra germplasm revealed that no germplasm was found resistant. Among them, 2 (TR-BH-39, TR-BH-40) were found as susceptible and 6 (TR-BH-45, TR-BH-46, USM-5016, USM-5017, USM-5017/A&USM-5018) highly susceptible in reaction. Among 8 tomato germplasm one germplasm (TR-TOM-49) was categorized as resistant. Among the rest, 3 (TR-TOM-46, TR-TOM-61&TR-TOM-52) were found as susceptible and 4 (TR-TOM-53, TR-TOM-35, TR-TOM-51 &TR-TOM-62) highly susceptible in reaction.
- 40 lentil germplasms were evaluated during the year 2024-25, revealed that 9 germplasm accessions (L-4076, L-4717, IC-248969, L-4730, DPL-21, L-7103, JL-1, P43103, ILL-6002) was categorized as resistant. However further confirmation is required for the germplasm showing resistance in reaction.
- Screening result of 5 local guava varieties (Khaja, Allahabad, Punjab, Desi, 5-7) against root knot nematode, *Meloidogyne incognita* race II revealed that all the varieties were susceptible and highly susceptible in reaction.
- Application of *Bacillus subtilis* @ 2.5 kg along with 2.5 tons of FYM.ha^{-1} recorded lowest final nematode population (387.50/ 200 cc soil +5g root) and RKI (2.22) with 49.40 % reduction in population over control and highest yield (20.10 t. ha^{-1}) with 40.06 % increase over control in brinjal.
- Soil application of *Purpureocillium lilacinum* @ 2.5 kg along with 2.5 tons of FYM.ha^{-1} recorded lowest final nematode population (250.50/200 cc soil & 96.50/5 g root) and RKI (2.55) in tomato.
- Nursery bed treatment with Neem cake @ 2 tons. ha^{-1} 15 days before sowing was very effective and gave about 33.26 % decrease in nematode population as compared to control plot in tomato at farmer's field as a demonstration trial.
- Application of *P. chlamydosporia* @ 30 ml. plant^{-1} + B. subtilis@ 30 ml. plant^{-1} + Neem cake @ 100 g. plant^{-1} recorded lowest soil and root nematode population over

the years with 44.81 % soil nematode population reduction over control and highest yield increase over control (25.22 %).

- Organized Nematode Awareness Day on 7th July, 2024; imparted training to the farmers, Input dealers, and SMS of the KVKs.

Screening of okra and rice germplasm against nematode infestation

AINP on Onion and Garlic (Voluntary Centre)

This volunteer centre was established at BCKV in 2008.

- Some potential open pollinated onion accessions were identified in Red kharif group (RAV-23-11; RBV-23-13), white kharif group (WAV-23-41), red late kharif group (RBVL-23-02), white late kharif group (WAVL-23-29). Among the hybrids, RAH-23-33 was found promising in kharif season in West Bengal.
- Among the open pollinated Red rabi onion genotypes, RAV-23-05, RBV-23-44 and RCV-23-76 was found promising. Among the hybrid, red rabi onion accessions, RAH-23-51, RBH-23-83, RHC-23-91 were found promising. In hybrid white rabi onion trial, WAV-23-06 was found promising.
- Some garlic genotypes, GNA-23-09, GNB-23-32 and GNC-23-77 recorded the highest marketable bulb yield in the Gangetic plains of West Bengal.

Conduction of onion trials and storage of onion in low cost storage structure

AINP on Pesticide Residues

By completing 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 project, which began

operations at BCKV in 1984, fulfilled its mandate to ensure food safety and security by conducting thorough research on pesticide residues in food commodities, soil, and water. The project has established a very well equipped NABL accredited laboratory. The following is a summary of the major accomplishments.

- During this year, a total of one multi-location supervised sponsored field trials on one new or existing molecules of pesticides on crop-pesticide combination were conducted by BCKV Centre. BCKV Centre evaluated the residues and persistence (dissipation) of Velum 400 SC (Fluopyram 400 SC) on banana. The pesticide residue data so generated our centre has 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, "Monitoring of Pesticide Residues at National Level" sponsored by Department of Agriculture, Cooperation & Farmers Welfare, Ministry of Agriculture & Farmers Welfare, BCKV Centre collected around 300 samples of vegetable, fruits from retail outlets, APMC markets, organic outlets, farm gate located in different parts of West Bengal and analyzed by Export Inspection Agency (EIA), Kolkata for the possible presence of various groups of pesticides such as organo-chlorine, organo-phosphorus, synthetic pyrethroids, carbamates, neonicotinoids, herbicides, fungicides, etc.
- A Patent (Indian) was granted during this year on "Nanoemulsion Pesticidal Formulation of *Pongamia pinnata*," Inventors: Purkait. A, Hazra D.K.. and Kole R.K. *vide* Patent No. 526504.

AICRP on Plantation Crops

The project began operations at BCKV in 1982 with the following goals: collecting, conserving, and assessing location-specific germplasm and hybrids; creating mother blocks and high-quality planting materials; showcasing released coconut varieties; and creating a cropping system based on coconuts that includes spices and other crops. The following is a summary of the main conclusions.

- Maintained 30 exotic and indigenous germplasm of coconut.
- Developed 5 Tall × Tall crosses of coconut and hybrids were evaluated.
- Established seed garden for the 3 released varieties from the centre.
- Evaluated 5 Dwarf × Dwarf crosses of coconut
- Evaluated 10 newly released coconut varieties
- Collected and evaluated 10 local germplasm.
- Standardized suitable variety for tender nut

- Standardized agronomic schedules for coconut based cropping system model
- Standardized agronomic schedules for important organic spices under coconut eg ginger, turmeric, chilli, coriander, black pepper etc. as coconut based cropping system model
- Maintained black pepper varieties in coconut gardens for performance study.
- Observed 'World Coconut Day' on 2nd September this year and distributed quality plant materials to the farmers.

Activities of AICRP on Plantation Crops

AICRP on Potato

Since 1972, the AICRP on potatoes at BCKV has been in operation. The key accomplishments are outlined below.

- Maintained 63 germplasm including breeding lines and released varieties of potato and baby potato.
- Some potential breeding lines under the category of white skinned table potato *viz*., AICRP-P-97, AICRP-P-119 (short duration); AICRP-P-1, AICRP-P-9, AICRP-P-79 (medium duration); AICRP-P-1, AICRP-P-9 (long duration); red skinned table potato category namely, AICRP-P-45, AICRP-P-46, AICRP-P-76, AICRP-P-82, AICRP-P-14, AICRP-P- 53 (medium and long duration); processing category, AICRP-P-77, AICRP-P-106, AICRP-P-107, AICRP-P-108, AICRP-P-94, AICRP-P-57, AICRP-FF-04 (long duration); heat tolerant category, AICRP-P-48, AICRP-P-42 (medium and long duration) and baby potato category, AICRP-P-95 and Badami (medium and long duration) have been identified.
- A forecasting model "INDO BLIGHTCAST" against late blight disease of potato has been successfully validated in various potato growing regions of West Bengal. The disease prediction was disseminated through TV, Radio and daily leading newspapers and decision support system was also provided to the farmers.
- Two foliar applications of zinc sulphate @2 g. l^{-1} at 25 and 50 days after transplanting or soil application of zinc @2.5 kg. ha^{-1} along with one foliar application of zinc

sulphate @2 g.l^{-1} at 50 days after transplanting is recommended in Kalyani region of West Bengal for significant increase of zinc content in potato tubers.

- After rice crop surface planting of potato below paddy straw mulch @10 t/ha using recommended dose of fertilizer without any tillage is recommended for potato cultivation in eastern region of India (Kalyani and Patna). It also recorded higher organic carbon build up. It also reduced the straw burning issue and ensured timely planting of potato particularly under heavy rainfall situation during onset of *rabi* season.
- Fipronil 0.3G/Cartap hydrtochloride 4G @ 20-25 kg. ha^{-1} at the time of earthing up is recommended for the management of sucking pest in potato.
- Participated in different Krishi Mela and farmers' training programme organized by KVKs, NGOs, GoWB etc.

Expert team from BCKV with Govt. officers of West Bengal visited to selective potato farmers' fields affected by hail storms in Hooghly District and gave suggestive measures

Expert team from BCKV with officers from Dept. of Agriculture, Govt. of West Bengal visited to selective potato farmers' fields affected by oddly shaped, malformed potato tubers found in Hooghly district, West Bengal and performed necessary laboratory tests with the help of ICAR-CPRI, Shimla and submitted final report to Govt. of West Bengal along with suggestive measures.

AICRP on Pulse Seed Hub

The goal of the project, which began operations at BCKV in 2016, was to boost the production of important pulse crop seeds. The project has created a processing unit and go-down at Teaching Farm in Mondouri, BCKV. The project produced the following amount of seed materials.

Season: Spring-summer		
Crop	**Seed class**	**Amount (kg)**
Mung bean	Breeder-Foundation	167.00
	Foundation-Certified	536.00
	Truthfully labelled	64.00
Urd bean	Breeder-Foundation	3.00
	Foundation-Certified	23.50
Season: Kharif		
Crop	**Seed class**	**Amount (kg)**
Mung bean	Breeder-Foundation	457.00
	Foundation-Certified	215.00
Urd bean	Breeder-Foundation	326.00
	Foundation-Certified	2352.00

Seeds of following varieties produced

Crop	**Variety**
Mung bean	Shikha, Soorya, Vasudha, Kanika, Varsha, Heera, Virat, Pusa 1431, Pusa 1641, IPM 2-03
Urd bean	PU 8, Kota Urd 4, IPU 10-26, PU 1, IPU 13-1, PU 9, IPU 11-2, PU 7
Lentil	L 4717, BL 16, IPL 315, IPL 220, IPL 526, IPL 321, WBL 77, KLS 122, IPL 329
Lathyrus	Bidhan Khesari 1, Prateek
Chickpea	Bidisha, PDKV-Kanak, PDKV-Kanchan, JAKI 92-18, Gulak, Pusa 3043
Field pea	IPFD 13-2, IPFD 12-2, IPFD 6-3, IPFD 10-12

Different classes of seed production of pulse crops

AICRP on STCR (Soil Test Crop Response)

In 1994, the project began operations at BCKV. The key accomplishments are outlined below.

- Soil spectral and physico-chemical information and library system was developed for the soils of West Bengal by diverse range of geo-referenced soils collected from different regions.
- From a long-term study (25 years), it was reported that green manure along with bio-fertilizer and reduced chemical fertilizer produced maximum yield and NPK uptake in rice. Organics either in form of farm yard manure (FYM), green manure or biofertilizers had a significantly positive effect on soil quality.
- Soil Test Based Target yield equation (STCR equation) was developed through STCR design based field trials and validated through FLD field trials on spinach crop. Nutrient requirement (NR), contribution from soil (CS) as well as fertilizer (CF) and Fertilizer Adjustment Equation for Targeted Yield of spinach are presented in the following Table.

Development of target yield equation for spinach for soil test based judicious fertilizer recommendations in Inceptisols of West Bengal

Nutrient	Basic data				
	NR (kg. q^{-1})	CS (%)	CF (%)	CM (%)	Fertilizer adjustment equations
N	1.96	47.24	82.86	4.29	FN = 4.66 T – 0.57 SN – 0.05 M
P_2O_5	0.25	18.71	45.77	3.45	FP_2O_5 = 0.54 T – 0.41 SP – 0.08 M
K_2O	0.51	11.22	48.54	6.34	FK_2O = 1.06 T – 0.23 SK – 0.13 M

Where as

FN = Fertilizer nitrogen (kg ha^{-1})
FP_2O_5= Fertilizer phosphorus (kg ha^{-1})
FK_2O = Fertilizer potassium (kg ha^{-1})
SN=Available soil nitrogen (kgha^{-1})
SP = Available soil phosphorus (kg ha^{-1})
SK=Available soil potassium (kg ha^{-1})

T=Desired yield target (q ha^{-1})

- Soil Test Based Target yield equation (STCR equation) was developed through STCR design based field trials and validated through FLD field trials on spinach crop. Nutrient requirement (NR), contribution from soil (CS) as well as fertilizer (CF) and Fertilizer Adjustment Equation for Targeted Yield of French bean (Var. Falguni) are presented in the following Table.

Development of target yield equation for French bean for soil test based judicious fertilizer recommendations in Inceptisols of West Bengal

Nutrient	Basic data				
	NR (kg. q^{-1})	CS (%)	CF (%)	CM (%)	Fertilizer adjustment equations
N	4.19	14.03	103.7	16.65	FN = 4.66 T – 0.57 SN – 0.05 M
P_2O_5	0.25	3.61	12.32	1.11	FP_2O_5 = 0.54 T – 0.41 SP – 0.08 M
K_2O	3.81	25.86	72.41	12.22	FK2O = 1.06 T – 0.23 SK – 0.13 M

Where as

FN = Fertilizer nitrogen (kg ha^{-1})
SN = Available soil nitrogen (kgha^{-1})
FP_2O_5 = Fertilizer phosphorus (kg ha^{-1})
SP = Available soil phosphorus (kg ha^{-1})
FK_2O = Fertilizer potassium (kg ha^{-1})
SK = Available soil potassium (kg ha^{-1})

T = Desired yield target (q ha^{-1})

- Application of 100-150 kg N ha^{-1} and cultivation of medium duration variety (IET-15191) may be an efficient non-traditional approach for better micronutrient nutrition along with curtailment in cost of production and water use.
- Developed an innovative soil image processing-based soil fertility sensing model to rapidly assess soil fertility focusing on critical soil fertility parameters for various agro-climatic zones of West Bengal.
- Explored the potential of a smartphone-integrated imaging device combined with a digital soil mapping (DSM) approach to estimate and spatially map soil available P in six districts of West Bengal, India which offers a cost-effective, accurate, and practical tool for soil P assessment and mapping.
- The project celebrated "World Soil Day" during this year and conducted many Farmers' training cum awareness programmes

Field demonstration conducted by AICRP on STCR

Training programmes conducted by AICRP on STCR

AICRP on Tuber Crops

The project started functioning in this university since 1976 with specific objectives including collection, conservation, and utilization of tuber crop biodiversity resources, development of new varieties, standardization of improved packages of practices, and environmentally friendly plant protection measures. The key outcomes are outlined below.

- Maintained a total of 415 germplasm of 15 different tropical tuber crops in field gene bank. An area of about 0.5 acres was brought under seed corm production of elephant foot yam.
- High yielding varieties of one orange-fleshed sweet potato cultivar having high tuber yield (34.36 $t.ha^{-1}$) and β-carotene content (7$mg.100g^{-1}$) and one Dasheen taro cultivar with high corm yield of 20.45 $t.ha^{-1}$ have been identified and distributed quality planting materials to the farmers
- Organic treatment combinations (green manure cowpea (12-13 t ha^{-1}) + corm treatment with cowdung slurry, neem cake (1-2 kg per bucket of slurry) and *Trichoderma harzianum* (5 g per kg seed) + *Trichoderma harzianum* (2.5 kg per tonne of FYM- neem cake mixture) incorporated FYM @ 36 t ha^{-1} (3 kg per pit) & neem cake 1 t ha^{-1} (80-85 g per pit + green manure cowpea (12-13 t ha^{-1}) and ash @ 3 t ha^{-1} (250 g per pit) at 2 MAP) was found promising for increasing yield in elephant foot yam (50.43 tha^{-1}).
- Effective measure like ground cover or raising green manure cowpea as intercrop and incorporation in soil after 45 days of planting with postharvest emergence of herbicide at 90 days after planting was found effective in controlling weeds in elephant foot yam.
- Organic control measure like dipping of cormels in *Trichoderma* amended cow dung slurry + soil application of *Trichoderma* amended vermicompost @100$g.plant^{-1}$ at the time of planting and later at the time of intercultural operations was found promising in controlling taro blight.
- Organized many farmers' training programmes for SC and women farmers on crop production and value addition of tropical tuber crops.

AICRP on Vegetable Crops

The project was started at BCKV in 1975 with an aim to collection, conservation and utilization of wide array of germplasm of different vegetable crops; developing trait specific varieties and hybrids and developing protocols for effective management of different biotic stresses. The salient findings are summarized below.

- Collected, characterized and maintained large number of germplasms of different vegetable crops viz., teasle gourd (24 no.), pointed gourd (39 no.), tomato (65 no.), dolichos bean (30 no.), cowpea (25no.), brinjal (51no.), chilli (42no.).
- The project has got 15 accession numbers (IC) of germplasm from NBPGR.
- By utilizing genetic resources, the project has developed many trait specific breeding lines and identified promising heterotic combinations of different vegetable crops.
- The project has contributed 04 new entries of different vegetable crops for testing at national trials during this year.
- Developed and notified okra variety **'Bidhan Sahebmukto'** which is resistant to *bhindi yellow vein mosaic virus* disease (*vide* Notification no. SO 1362(E) dt. 12.03.2024).

- Recommended two plant protection technologies namely, management of root rot, collar rot and wilt diseases of French bean and cucumber at National level.
- Conducted training programmes for the farmers and input dealers to disseminate latest technologies on vegetable production. Observed Field Days to acquaint with the latest varieties/hybrids and new IPM technologies for the farmers.
- The project has conducted two developmental programmes, Tribal Sub-Plan and Schedule Caste Sub-plan. More than 450 tribal farmers and 300 SC farmers have been distributed critical inputs including high yielding varieties and hybrids of different vegetable crops. The farmers have been trained with the latest technologies on vegetable production, protection and processing.

Development, release and notification of okra variety 'Bidhan Sahebmukto'

Distribution of critical inputs to SC and ST farmers by AICRP on Vegetable Crops

AICRP on Weed Management

In order to ascertain the pattern of weed flora distribution under various cropping systems in the region, the effect of weed flora on the health and performance of various field and horticultural crops, the impact of herbicide molecules on the physicochemical properties of soil, and the development of suitable recommendations for weed management in crops and cropping systems, the project has been in progress at BCKV since 2016.

- In wet direct seeded rice sown during kharif season, weed management practices including application of Pendimethalin 38.4% + pyrazosulfuron ethyl0.85% ZC 785

g. ha^{-1} as PE fb bispyribac-sodium 25g.ha^{-1} + [(metsulfuron methyl + chlorimuron ethyl) (RM)] 4 g. ha^{-1} as PoE (25 DAS) showed the best performance with respect to the maximum weed control efficiency, grain and straw yield and economics.

- In kharif scented rice (var. Gobindobhog) sown under natural farming system, ICM (Integrated crop management) practice recorded least weed number and dry weight, and maximum weed control efficiency in the field. The maximum rice yield components, grain and straw yield were observed with the application of ICM practice. It was followed by the treatment receiving Soil mulch and HW at 20 and 40 DAS. Straw mulch incorporation of previous rice crop and 1 HW at 25-30 DAS performed better in comparison to residue incorporation of previous crop before sowing and one mechanical weeding through Cono weeder at 25-30 DAS.
- Organized many farmers' training programmes.

Activities performed by AICRP on Weed Management

AICRP on Wheat and Barley Improvement

The project started functioning at this university during 1972-73. The key findings are summarized below.

- Evaluated a total of 443 advanced breeding lines of wheat; 290 breeding lines through nurseries and utilized 53 lines for further breeding programme. Evaluated 2226 advanced breeding lines of wheat & barley for foliar leaf blight.
- Attempted 320 fresh crosses and developed 26 different F_1 cross combinations of wheat.
- Contributed 10 entries in IPPSN and 3 entries namely (BCW 44, BCW 46 and BCW 35) in National Initial Varietal Trials (NIVTs) and this year one entry BCW 32) has been promoted to AVT-I.
- Strip tillage with full residue and microbial consortia application showed delayed physiological and harvest maturity (2-3 days) and conventional tillage with full residue and microbial consortia application showed delayed physiological and harvest maturity (1-2 days) with higher expected yield than other treatment combination.
- The twice application of progesterone (0.314 mg L^{-1} of water) as a heat stress mitigator at the booting and anthesis stages of the wheat crop resulted in the highest leaf turgidity and delayed physiological maturity (by an average of 3 days) and

harvest maturity (by an average of 11 days). This was followed by the application of sodium nitroprusside (26.192 mg L^{-1} of water) at the booting and anthesis stages, which also showed higher turgidity and delayed physiological maturity (by an average of 2 days) and harvest maturity (by an average of 9 days), with a higher expected yield compared to other heat stress mitigator treatments.

- Conducted many farmers' training programmes and FLDs in different wheat growing districts of West Bengal.

Activities of AICRP on Wheat and Barley Improvement

AICRP on Mushroom (Voluntary Centre)

The AICRP on Mushroom was established at BCKV in 2015. The project has developed good laboratory facility for commercial spawn production. The key findings are summarized below.

- **Collection, identification and conservation of wild edible and medicinal mushrooms**
- Surveys were conducted in districts of Nadia, 24 Paragnas North and Hoogly and twelve samples of wild edible mushroom consumed by local population were collected. A total number of 14 specimens of gilled fungi and polypores have been collected and tentatively identified as *Pleurotus ostreatus*, *Termitomyces microcarpus*, *Volvariella Volvacea*, and *Calocybe indica* were identified as *Psathyrella* spp, *Lentinus*, *Lepiota*, *Ganoderma lucidum*, *Ganoderma applanatum*, and *Ganoderma tusague*. Characterization of mushroom samples was done and efforts were made to identify the mushroom samples. Cultures along with data have been

submitted to the nodal centre after identifying the samples. Isolation and pure culturing of these fungi have been made in PDA and Mushroom growth medium. Spore prints and dry specimens wherever possible were taken and preserved.

- **Evaluation of high yielding varieties/strains of Oyster Mushroom (*Pleurotus bulmonarius*)**
- Evaluated high yielding varieties/strains of seven Oyster Mushroom strains (PP-23-201, PP-23-202, PP-23-203, PP-23-204, PP-23-205, PP-23-206) using paddy straw as substrate. The analysed data revealed that the strain, PP-22-205 showed the maximum yield (71.79 kg.100 kg^{-1} of dry substrate) followed by strain PP-23-204 ((70.14 kg.100kg^{-1} of dry substrate).
- Organized 'Mushroom Day' on 24th December and conducted many farmers' training programmes.

Organized 'Mushroom Day' and farmers' training by AICRP on Mushroom

AICRP on Seed (Crops)

The major mandate of the project is summarized below.

- Quality seed production with supply of the seeds to farmers.
- Production of Nucleus and Breeder seeds of released varieties to upgrade the seed system.
- Enhanced the Seed Replacement Ratio.
- Provided seeds to Tribal and Scheduled-Caste farming community.
- Organized farmers' training, Field Day/ Seed Day etc.

Different classes of seed production of rice and mustard

AICRP on Spices (Voluntary Centre)

This centre was established at BCKV since 2009 with an objective to identify suitable cultivar of different spices including ginger, turmeric, coriander, fenugreek and nigel, to develop improved technologies and to popularize the spices cultivation in the State.

- A germplasm block of aromatic turmeric along with 17 nos. of fenugreek and 14 nos. of coriander germplasm were maintained.
- Some of the potential advanced breeding lines of coriander (CoR-200, CoR-206 and CoR-194) and fenugreek (FGK-146, FGK-152, FGK-148, FGK-155) have been identified.
- Survey and monitoring of diseases and insect pests of seed spices was continued at on farm and off farm trials.
- Published two booklets (in bengali) on improved cultivation practices of turmeric and ginger
- Organized capacity building programs for SC farmers and distributed quality planting materials to the farmers.

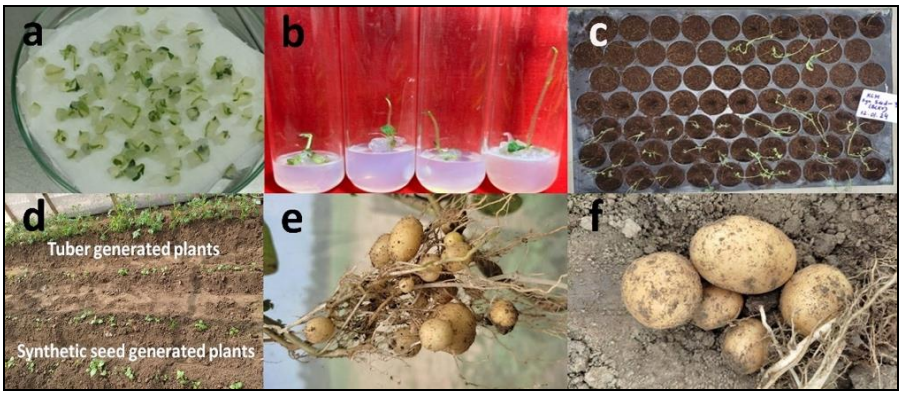
Field demonstration conducted by AICRP on Spices

Crop Research Unit

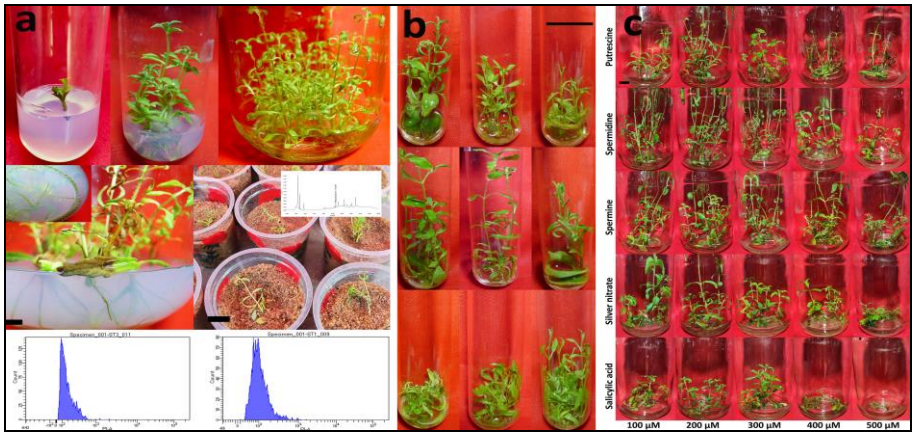
The Crop Research Unit (CRU) is a cent per cent Government of West Bengal-funded establishment that started its journey in March, 1980. Since its inception, it has focused primarily on the development/collection of diverse germplasm resources around the state, their conservation, and utilization for the more significant benefit of the farmers of this state. The key accomplishments are summarized below.

- Maintained several rice and lentil genotypes and has developed several RIL and mutant populations of rice, lentil, stevia, etc.
- The breeders' seed indent of rice and lentil varieties released from the unit reached 16 and 6 quintals, respectively, this year. Another rice line is ready for CVRC release, as identified in AVT2.
- Two elite mutant lines of stevia, known for their higher steviol glycoside content and biomass, are ready to confirm their multi-location performance through the AICRP system. A robust multi-fungal resistance lentil mutant is now prepared for genome analysis as it did not exhibit any yield penalty compared to its parent, Moitree.

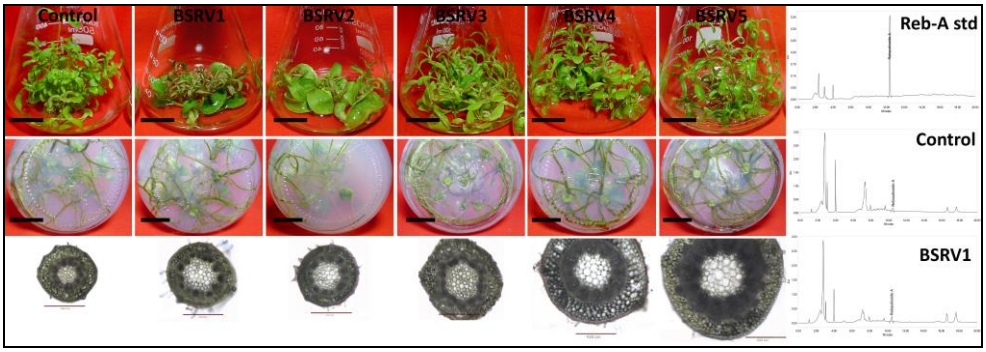
- Synthetic potato seeds (cv. Kufri Chandramukhi) performed equally well with the conventional cultivation practice of potatoes**.** The unit developed a new methodology to identify genotypes with accelerated photo-protection recovery ability (5 minutes only vs. the existing methodology >45 minutes).
- **S**cientists attached with this project served as esteemed members of much prestigious research advisory committees of the national and state institutes of repute, peer-reviewed international journal editorial boards, scientist-recruitment and evaluation boards, etc.
- The unit facilitates the irradiation facility for researchers across India.



Evaluation of the potentiality of synthetic potato seeds (cv. Kufri Chandramukhi) in the field



***meta*-Topolin (*m*T) and polyamine-induced high-frequency shoot initiation, multiplication, and proliferation for biomass production of stevia**



Bidhan stevia variant lines BSRV1 and BSRV2 exhibited exceptional biomass production, rebaudioside-A [66 mg/g DW)] and stevioside (6.60 mg/g DW)

Survey, Selection and Mass Production of Nodule Bacteria

The Survey, Selection and Mass Production (SSMP) unit is a cent per cent Government of West Bengal-funded establishment that started its journey in 1978.

- This unit is regularly producing carrier-based and liquid quality biofertilizers of *Rhizobium, Azotobacter, Azospirillum* and PSB as per indent. A significant sale proceed amount of Rs. 4,70,127/- (Rupees four lakhs seventy thousand one hundred and twenty-seven only) was generated during this year.
- Season-wise survey, isolation and efficiency testing of native strains of *Rhizobium Azotobacter, Azospirillum* and P-solubilising bacteria (PSB), biocontrol agents like *Trichoderma* was done through laboratory and field experiments.
- Two highly efficient PSB strains, *Enterobacter* sp. AJ14 (NCBI Accession No. OQ568699) and *Enterobacter ludwigii* AJ23 (OQ568700) were identified from red and laterite soils of West Bengal. These strains solubilized 291.50 and 275.13 mg L^{-1} of P from tri-calcium phosphate in Pikovskaya broth, respectively.
- An Experiential Learning Programme (ELP) on 'Biofertilizer Production and Marketing' for undergraduate students was also organized during this year in this unit.

Training programmes organized by Survey, Selection and Mass Production unit

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

The Cost of Cultivation Scheme started functioning at this university since 1974 with some mandates of collecting real time data on 13 principal viz. paddy, wheat, maize, jute, lentil, mung bean, black gram, gram, rapeseed and mustard, groundnut, sesame, potato and onion from farmers through cost accounting method for recommendation of minimum support price (MSP) and other agricultural policy. The key accomplishments are summarized below.

- Submitted field level data to Economics, Statistic & Evaluation Division, MoA&FW, Govt. of India as per scheduled time frame for estimation of MSP.
- The Adviser (MSP) and other officials also discussed the different issues viz. cost of cultivation, production, quality, marketing, procurement by Govt. agency and international tread of Jute as well as the problems and prospect for revival of Jute industries in the state of West Bengal with our field functionaries. Director-in-Charge,

Field Officer, Assistant Statistician, Field Supervisor and Field man have participated in the National Workshop on “Cost of Cultivation Scheme” at University of Agriculture Science, Bangaluru, Karnataka. State-wise different issues on sample selection, selection of crop complex for the block period: 2026-29, discrepancy in cost data, attendance in CCS-mTracker Apps and other technical, financial and administrative were discussed.

Adviser (MSP) interacted with Field functionaries and attended National Workshop at UAS, Bangaluru by staff members of the Comprehensive Scheme

Government Sponsored Projects (2024-25)

SL. NO.	Name of the project	Sponsoring Authority	Total cost (Rs.)	Name of PI
1.	Development and validation of molecular markers for novel alleles of candidate genes enhancing yield and low accumulation of arsenic from native rice germplasm. Niche Area,	ICAR GOI	107.09 lakh	Dr. Somnath Bhattacharyya, GPB, Crop Resesrch Unit
2.	Creation of seed hubs for increasing indigenous production of pulses in India.	(ICAR)	60.00Lakh	Dr. Rajib Nath, Prof., Dept. of Agronomy
3.	FASAL (Forecasting agricultural output using Space Agrometeorology and land based observations.	IMD. (GOI)	117.600 lakh	Dr. Asis Mukherjee, Asst. Prof, AICRP on Agrometeorology
4.	NICRA(National Initiative of Climate Resilient Agriculture(for XI plan)	ICAR	-	Dr. Saon Banerjee, Prof, Dept. of Ag. Meteorology & Physics.
5.	Gramin Krishi Mausam Sewa. (Mohanpur)	DST,GOI	1.42Lakh	Dr. Lalu Das, Prof, Dept. of Ag. Meteorology & Physics, Mohanpur Centre
6.	Gramin Krishi Mausam Sewa (Kakdwip)	GOI	-	Dr. A.K.Senapati, Assoc. Prof. in Ag. Entomology,RRS Kakdwip
7.	Sustainable production and extraction of Lemon grass oil through introduction of mobile oil extraction unit modified as 'Sustainable processing extraction and value addition of lemon grass in W.B.	MSME, Khadi & Village industries commission, GOI	14.98Lakh	Dr. Anupam Pariari Prof. of Dept. of Palntation Spices Medicinal and Aromatic Crops , Mohanpur Centre.
8.	Assesment of sustainability of multi-nutrient extraction for estimating available nutrients in soil under rice	Govt. of West Bengal	6.92Lakh	Dr. Sudeshna Mondal Asst. Prof. in the Dept. of Agril. Chemistry and Soil Science.
9.	In vitro mutagenesis of Stevia for enhanced production of steviol glycosides	BRNS, Govt.of India	26.50Lakh	Dr. Saikat Gantait, Asstt. Prof.,Dept. of GPB
10.	Use of Fly ash in agriculture for sustainable crop production and environmental protection	NTPC	143.7503 lakhs.	Dr. Sidhu Murmu, Asstt. Prof in Agronomy

11.	Smart agro-robot design for improving production of rice potato based cropping system through autonomous detection of agricultural situation	DST, Govt. of West Bengal	2.40Lakh	Dr. Poly Saha, Asstt. Professor in Plant Pathology.
12.	Consortium Research Project	ICAR	20.00Lakh	Dr. Arpita Das, Asst. Prof. in Dept. of GPB.
13.	Hyperspectral reflectance& multi nutrient..soil health in India	ICAR-NASF	15.92Lakh	Dr. Kallol Bhattacharyya, Prof. in Dept. of Soil Science.
14.	Use of agro textiles as prospective mulching material…Red & laterite zone of WB	GoWB	241.54 lakh	Dr. Susanta Kr De, Prof. in the dept. of Soil and water conservation.
15.	Socio-economic upliftment of SC/ST community through backyard papaya cultivation using jute agrotextile with pitcher pot irrigation with run-off & domestic waste water.	DST, GoWB	17.70Lakh	Dr. Susanta Kr De, Prof. in the dept. of Soil and water conservation.
16.	Study of rice yield under low light intensity using genomic approach under the XII plan scheme Incentivizing research in agriculture	ICAR	-	Dr. Somnath Bhattacharyya, GPB, Crop Research Unit
17.	Building lentil growing..climate smart lentil.	ICAR	12.89 lakh	Dr. Manabendra Roy, Prof. in Dept. of in Agronomy
18.	Development of novel mutant….marigold..approach	BRNS	32.52Lak	Dr. Jayoti Majumder, Asst. Prof. in dept. of Floriculture and Landscaping
19.	Productivity enhancement of pulses for food and nutritional security, improved livelihood and restoring soil fertility in red and laterite tract of west Bengal	GoWB	2.49Lakh	Dr. Rajib Nath. Prof. in Dept. of in Agronomy
20.	Community based livelihood enhancement	ICAR	59.2 lakh	Dr. Kallol Bhattacharyya, Prof. in Dept. of Soil Science.
21.	Evaluation of promising mutants of gladiolus and chrysanthemum under New Alluvial Zone	BARC…Govt. of India	0.96Lakh	Dr. Saikat Gantait, Asstt. Prof.,Dept. of GPB
22.	Agricultural drought assessment at sub-district level using both optical and microwave satellite	ISRO	19.53Lakh	Dr. Lalu Das Prof, Dept. of Ag.

	imagery			Meteorology & Physics, Mohanpur Centre
23.	Infrastructure upscaling of Commercial Apiculture Unit of BCKV for Scientific Honey Production & Marketing	Sufal Bangla, Dept. of Agril. Marketing, Govt. of WB.	130.94 lakh	Dr. Pranab Debnath, Asstt. Professor, Dept. of Agril. Entomology
24.	Capacity enhancement of Commercial Apiculture Unit of BCKV for Scientific Honey Production & Marketing	Sufal Bangla, Dept. of Agril. Marketing, Govt. of WB.	72.36 lakh	Dr. Pranab Debnath, Asstt. Professor, Dept. of Agril. Entomology
25.	Production, Marketing & Research for quality edible oils, cereals & spices.	Sufal Bangla, Dept. of Agril. Marketing, Govt. of WB.	207.55 lakh	Dr. Souti Mukherjee, Prof, Dept. of PHE.
	Setting up of facility centres of Pulse mill (Dal Mill in Krishi Bazars for pulse growing farmers of West Bengal		271.82lakh	Professor, Dept. of Soil & Water Engg.
	Setting up of facility centres of Rice Mill in Krishi Bazars for rice growing farmers of West Bengal		575.8725lakh	
26.	Up-gradation of Market-linkage Network for Promotion of Aromatic and Special Rice of West Bengal	Sufal Bangla, (BCKV 228.1 lakh)	371.5Lakh	Dr. Mrityunjoy Ghosh Prof. in the Dept. of Agronomy
27.	Comprehensive Scheme on Cost of Cultivation	GOI	-	Dr. P.K.Sahu Prof. in the Dept. of Agricultural Statistics

Summery of fund out lay and externaly funded project 2024-2025

	Sponsoring authority	**Total project**	**Total cost (Rs.) in lakh**
1	ICAR	8	275.91
2	DST	3	21.52
3	Sufal Bangla	4	1630.04
4	GOWB	2	248.46
5	IMD. (GOI)	1	117.600
6	MSME, Khadi & Village Industries Commission, Govt.of India	1	14.98
7	BRNS, Govt.of India	2	59.03
8	NTPC	1	143.750
9	ISRO	1	19.53
10	BARC, GOI	1	96,600

International Project 24-25 onwards

Sl. No.	Title	Funding agency	Scientist	Year of start	Duration
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
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
3	Circular urban cultivation systems with re-usable textile growing substannces (Circultex) Indo-German	Indo-German Science & Technology Centre,Government of India	Dr. Sanjit Debnath	23.03.21	3yrs
4	Accelerating Genetic gains in Maize & Wheat Livelihoods (AAG) CIMMYT	CIMMYT	Dr. Anirban Maji	13.01.21	upto March 25
5	Genetic improvement of lentil resistance..rice-fallow..collar rot &lentil blight complex..ICARDA	ICARDA	Dr Arpita Das	11.03.23	Up to June, 25

Regional Research Station, Coastal Saline Zone, Kakdwip

Agromet advisory services related to weather forecasting, extreme weather events like cyclones, heat and cold waves, hailstorm and drought and mitigation for better crop production were provided to 1000 farmers of South 24 Parganas and Purba Medinipur districts through Whatsapp messages. In 2024-25, an amount of 133 kg and 116 kg seeds of Santoshi and Dudheswas variety of paddy, respectively, was produced. The total revenue generation of the RRS, Kakdwip was in the tune of Rs. 294501.00 and the same has been submitted to the University. Successful onion cultivation in *Kharif* season was first done at this farm and the *Kharif* onion production technology has now been popularized among the farmers in Akshaynagar, Namkhana, Sagar, Patharpratima areas under under South 24 Parganas district with the technical support from the scientists of the RRS.

Celebration of 51st year of establishment of BCKV

Planting of saplings of coconut, arecanut and other fruit crops

Popularization of *Kharif* onion

Regional Research Station, Red Lateritic Zone, Jhargram

In 2024-25, different trials related to the evaluation of suitable cultivars of mustard and lentil were conducted, and it was observed that mustard cultivars, *viz*. Pusa Mustard 30 , NRCHB 101, ID 6 and Pusa Mustard 25 and lentil cultivars *viz*. BM-7, BL-16 and HUL-57, were quite suitable in the rainfed situation of Jhargram district. Trials and seed multiplication of various millets were also conducted. The training for farmers on improved management practices of agriculture and allied sectors and training on "Weed management in cashew plantation" were conducted. The university foundation day was celebrated and DAESI programme was initiated. Several exposure visits were conducted by different block-level office, farmers, schools and college students. Awareness campaign on cashew, lentil, groundnut, millets and mustard cultivation was held on 10.05.24, 06.07.24 and 24.09.24 for the benefit of faming community of this zone.

Highlights : i) Identification of rainfed-suitable cultivars of mustard and lentil**. ii)** Successful trials and seed multiplication of millets**. iii)** Capacity building of farmers through training and awareness programmes**. iv)**Promotion of cashew and other allied crops in the district**. v)** Active engagement in exposure visits and extension activities for knowledge dissemination**.**

Exposure visit of college student RRS, BCKV campus

Soil and water conservation class for RAWE students

Exposure visit on different nursery at RRS, BCKV, Jhargram campus

Field level awarness programme on plantation

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 teachers of this station have taken up various research activities mainly with financial support from Ad-hoc R&D Projects (DST, Govt. of WB; DST, Govt. of India; DSIR, Govt. of India; NABARD, RKVY, Govt. of India and NTTM, GoI etc.), Private projects etc. The significant achievements for the year 2024-25 includes active engagement as Notified Breeder of BCKV for Breeder Seed production of rice, lentil, lathyrus, mustard and chickpea as per DAC and state indent. The RRS identified one rice variety as co-breeder with Prof. Somnath Bhattacharyya during 2024 and in the pipeline for release through CVRC. The station also developed some advanced breeding lines of blackgram and lentil. One Mustard (Yellow Sarson) breeding line has been nominated for National testing during *Rabi* season of 2024-25. Production of low-cost live-bearer ornamental fish seeds (Guppy and molly) through natural breeding in the cemented cisterns is another important achievement.

Highlights

- Active participation in Breeder Seed production of multiple crops (rice, lentil, lathyrus, mustard and chickpea)
- Identification of rice variety for potential release through CVRC
- Development of advanced breeding lines in blackgram, lentil, and mustard
- Successful low-cost ornamental fish seed production
- Strengthening location-specific research and sustainable farming practices in the New Alluvial Zone

These achievements contribute to crop improvement, diversification, and sustainable resource management in the New Alluvial Zone of West Bengal.

Vietnam koi fish

Ornamental fish breeding in cistern

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

In the year 2024-25, this centre introduced polythene mulch for the cultivation of vegetables such as bhindi, patal, chili, brinjal, tomato, and bitter gourd. This innovation effectively minimized weed growth, conserved water, promoted indigenous microbial activity, and reduced the reliance on inorganic fertilizers, enhancing sustainable agricultural practices. The plant metabolites as residue-free solutions for insect management were used. Five promising native Rhizobacteria, were evaluated on various crops to assess their PGPR performance and potential for disease management. The top-working technique of ber offers a solution by grafting superior-quality buds onto these trees using T-budding. Expansion of Bagda Kanthali banana cultivation in Birbhum was another achievement. The area under dragon fruit cultivation was expanded. Its rising demand and market value are making dragon fruit cultivation popular, boosting farmers' health, income, and agricultural sustainability.

Highlights

- Adoption of polythene mulch in vegetable crops for sustainable production
- Eco-friendly residue-free pest management using plant metabolites
- Evaluation of native PGPR Rhizobacteria for enhanced crop growth and disease resistance
- T-budding in ber for improved fruit quality
- Expansion of Bagda Kanthali banana and dragon fruit cultivation contributing to income and sustainability

These efforts strengthen the Centre’s mandate to promote innovative, sustainable, and income-generating agricultural practices in the Red & Laterite Zone of West Bengal.

Watermelon with plastic mulching

Chia seed plants

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

The screening of different wheat entries suitable for Laterite Zone of West Bengal was carried out by the centre in 2024-25. Along with that the performance evaluation of different cultivars were also carried out. Among the seven varieties evaluated, DBW-39 showed the highest plant height whereas BCW-46 showed shortest plant height followed by BCW-32, HD-2967 and BCW-44. In case of primary branches per plant, DBW-187 showed highest branches followed by BCW-44; whereas early flowering has been observed in HD 2967 and late flowering has been observed in BCW-44. It has been observed that DBW-187 showed maximum number of ear head followed by BCW-44, whereas DBW-187 showed maximum ear head length followed by BCW-44. In terms of seeds per ear head, DBW-187 showing maximum number of seeds per ear head followed by BCW-44. The DBW-187 is found to be the high yielding variety followed by BCW-44 and DBW-187 should be promoted in this zone.

Screening and evaluation of some wheat entries under red and laterite condition

Renovation of farm pond

Renovation of farm pond

Pelleted feed preperation by using pelletizer

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

The Regional Research Sub-Station (RRS), Chakdah, undertakes research in crop improvement, pest and disease management, and nutritional quality enhancement in pulses and cereals, with a focus on the New Alluvial Zone.

Crop Improvement Studies

Mungbean (*Vigna radiata*): 100 genotypes were evaluated for grain traits, hydration properties, and starch content. Sequence polymorphisms were identified in the GBSS (Granule Bound Starch Synthase) gene. The high-amylose genotype IPM-2-3 showed SNP variations in exon-7 of GBSS-I, resulting in amino acid substitutions. Further gene expression analysis is underway to elucidate functional impacts. Evaluation of aromatic and non-aromatic mungbean genotypes for nutritional traits was also conducted.

Lentil (*Lens culinaris*): Germplasm was screened for resistance to collar rot caused by *Sclerotium rolfsii*. Under the CRP Programme on Agrobiodiversity, funded by ICAR-NBPGR, 2,000 lentil accessions were evaluated. Three promising accessions (IC-241447, IC-317520, and IC-0095660) exhibiting stable resistance were identified for further utilization in breeding programmes.

Disease Management

Rice Blast Management: A newly developed fungicide, GPF-1521 (UPL Ltd.), was tested along with other fungicides including Isoprothiolane 40% EC, Picoxystrobin 22.52% SC, and Picoxystrobin 6.78% + Tricyclazole 20.33% SC. This was the second year of the trial, and results indicated that GPF-1521 @ 1.5 ml/litre of water was found to be more effective in managing rice blast than the other fungicides tested.

These activities strengthen the Station's mandate to enhance crop productivity, disease management, and germplasm utilization in the New Alluvial Zone of West Bengal.

Evaluation of newly evolved fungicides against blast disease of rice

DEAN STUDENTS WELFARE

East Zone Inter Univ. Cricket (Men)

Sl. No.	Name of the University/College/Faculty	Name and Location	Date
1.	Bidhan Chandra Krishi Viswavidyalaya	NIL	

Agri Unifest

Sl. No.	Name of the University/College/Faculty	Name and Location	Date	Name of the Award	Awardees Name	Name of the Students
1.	Bidhan Chandra Krishi Viswavidyalaya	NIL				

Annual Athletic Meet

Sl. No.	Name of the University/College/Faculty	Name and Location	Date
1.	BCKV	XLVI Annual Athletic Meet 2024-25	21st February, 2025

Agri-Meet : in Football (Men)

Sl. No.	Name of the University/College/Faculty	Name and Location	Date
1.	BCKV	NIL	

Annual Cultural Programme

Sl. No.	Name of the University/College/Faculty	Name and Location	Date
1.	BCKV	NIL	

Directorate of Extension Education at a Glance

The extension activities of this Viswavidyalaya deals by the Directorate of Extension Education as the apex facilitating organ to take care of outreaching various clientele groups and other stake-holders across the South Bengal districts of the state through its various delivery units. The customized segments are the 5 KVKs situated at 5 different districts under the direct administrative jurisdiction of the university along with the Agricultural Technology Information Centre (ATIC) and the Farmers' Academy Convention of Centre (FACC) are the units for such technology dissemination.

Agricultural Technology Information Centre (ATIC)

ATIC at BCKV equipped with reception counter, exhibition / technology museum, touch screen Kiosk, sales counter and farmers' feedback monitoring system. 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 2024, total 6472 visitors have recorded at ATIC. Total 3886 numbers books/technical bulletins were sold among 2621 visitors. During 2024, nearly 883 kg of different technological inputs comprising total value of Rupees seventy thousand only were sold to different stakeholders.

Farmers Academy and Convention Centre (FACC)

Farmers' Academy and Convention Centre (FACC), formerly known as Lake Hall,

has evolved into a premier hub for agricultural education and extension in eastern India. Located in the scenic town of Kalyani, West Bengal, its serene environment and comprehensive facilities including an AC auditorium with multimedia and internet, along with boarding and dining make it a preferred venue for seminars, workshops, training programs, and social events. It features open lawns, an open stage for cultural programs, round-the-clock room service, water purification, car parking, and 24-hour security.

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	2
3.	Exposure visit	1
4.	Group Meeting / Review Meeting /QRT Meeting/ Officers' Meeting/ HRD meeting	11
5.	Training programme	3
6.	Reunion programme	30
7.	Social function	6

Brief Statistics of DAESI Programme:

DAESI batch No.	No. of students enrolled	Status
13	40	Ongoing
14	40	Ongoing

Revenue Generated by FACC in Financial Year 2024-25: Rs. 27.23 Lakh (approx.)

Recognition Received by the FACC:

FACC-BCKV was awarded with 2nd prize for their performance as one the outstanding Nodal Training Institutes of DAESI in West Bengal for the year 2023-24

Technological Backstopping by Directorates of Extension Education (DEE, BCKV)

Research and extension system interface workshop / capacity building programme organized in 2024.

Sl No.	Title of the training programme	Duration	Participant
1	Emerging crop management strategies in weather induced stresses	7th to 8th March, 2024	26
2	Krishi - O - Udyan Mela, 2024	14th to 15th February, 2024	1500

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 2024. Among different training programmes majority of the programmes were conducted for the farmers and farm women (50.6%) followed by rural youth (9.1%) and extension personnel (40.3%).

Different category wise participants trained during 2024 through the Extension Directorate:

Clients group	HQ & FACC	Nadia KVK	Hooghly KVK	Howrah KVK	Purba Medinipur KVK	Jhargram KVK	Total
Practicing Farmers	1620	1869	3558	2693	4033	1758	**15531**
Rural Youths	0	666	1271	589	181	65	**2772**
Extension Functionaries	0	4378	1715	5716	576	19	**12404**
Total	**1620**	**6913**	**6544**	**8998**	**4790**	**1842**	**30707**

NADIA KRISHI VIGYAN KENDRA (2024)

Nadia Krishi Vigyan Kendra is situated in the eastern side of West Bengal with its headquarters in Krishnanagar. Geographically, the district lies at 23°47'N latitude, 88°56'E longitude, in the new alluvial gangetic plains of West Bengal. The blocks of eastern part of the district are under jurisdiction of Nadia KVK.

During 2024, Nadia KVK, BCKV has been declared as India's 1st Net Zero Certified KVK as certified by UK based i-NO Carbon Limited. This KVK also have signed a MOU with RISE-IISER towards future research and extension programme through rural entrepreneurship development and other means. Nadia KVK have played an active role for international cross broader issue and alternative livelihood generation through bee keeping and mushroom cultivation in collaboration with 32 BN BSF. Successful on farm trial on pointed gourd in ground with straw mulch and poly tunnel cover in winter months subsequent pre-kharif and kharif cultivation of cauliflower as intercrop has been recommended for large scale demonstration as scientific advisory committee recommendation.

During 2024 it had conducted 208 training programme for the 6913 participants of which about 49% from SC/ST community. Nadia KVK conducted 311 number other extension activities with 13,235 participants of which around 48.9% SC/ST community.

Table 1: Technological intervention of KVKs through different approaches during 2024

Sl. No.	Activities	Magnitude
1.	Training (including skill training)	208 No./6913 participants
2.	On Farm Trial	9 No./ 77 participants
3.	Front Line Demonstration	80.7 ha/1690 participants
4.	Other extension activities	311 Nos./13,235 participants
5.	Technological input production at KVK farm	270.8 q
6.	Planting material produced	73,600 Nos.
7.	No. of soil health card issued	210 Nos.
8.	Media coverage	12 Nos.





HOOGHLY KRISHI VIGYAN KENDRA (2024)

Hooghly KVK situated at its district headquarter 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 2024, Hooghly KVK trained more than 80 rural youths in different blocks and help them in establishing entrepreneurial units in poultry rearing, mushroom production, vermicomposting and vegetable seedling raising under ARYA project and linked them with district lead banks for submission of DPR. Besides, KVK also provide market linkage of their produce.

During this time, the KVK is actively participated in skill development training of more than 1,200 MGNREGA job card holders in association with District Rural

Development Cell, Hooghly Zilla Parishad for upscaling the economy as well as the livelihood of the job card holders through small scale entrepreneurship development in Poultry farming and Mushroom production. In 2024, 3 varieties were also registered under **PPVF&RA.**

In 2024, 183 training programme were conducted for 6,544 participants, of which approximately 53.6% belonged to the SC/ST community. Additionally, Hooghly KVK organized 197 extension activities, reaching 47,967 beneficiaries, with about 45.3% from the SC/ST community.

Technological intervention of Hooghly KVK through different approaches during 2024

Sl. No.	Activities	Magnitude
1.	Training (including skill training)	183 No./ 6,544 participants
2.	On Farm Trial	10 No./ 78 participants
3.	Front Line Demonstration	240 ha/890 participants
4.	Other extension activities	197 Nos./7,134 participants
5.	Technological input Production at KVK farm	110.7 q
6.	Planting Material Produced	1,32,600 Nos.
7.	No. of soil health card issued	405 Nos.
8	Media coverage	156 Nos.





HOWRAH KRISHI VIGYAN KENDRA (2024)

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.

Technological intervention of Howrah KVK through different approaches during 2024

Sl. No.	Activities	Magnitude
1.	On Farm Trial	8 No.
2.	Front Line Demonstration	20 Nos. 68.27 ha/ 612 participants
3.	Other extension activities (Field day, Advisory service, Diagnostic visits, KisanMela, Scientific visit to farmers field etc.)	390 Nos./23088 participants
4.	Technological input production at KVK farm	56 q
5.	Planting Material Produced	5400 Nos.
6.	No. of soil health card issued	-
7.	Media coverage	25 Nos.

SALIENT ACTIVITIES/ACHIEVEMENTS

i) 8 numbers of farmers from different parts of Howrah districts were felicitated for their recognition for receiving certificate from PPVFRA authority of Government of India.

ii) One of the 11 ATL schools under Howrah KVK, Lakshmipat Singhania Academy, Alipore, Kolkata, awarded as **"Best in Theme of Rural Ecosystem**" in India for the Student Entrepreneur Programme by **Dassault Systems during 2024** for developing a project **"Swadushya**" aims to increase the shelf life of fruits and vegetables.

iii) Howrah KVK conducted Mini Farmers Fair under "MERA GAO MERA GOURAV" programme in collaboration with ICAR-NINFET, Kolkata.

iv)Establishment of new demonstration model unit of Integrated Farming System this year which was inaugurated by Hon'ble Vice-Chancellor, BCKV, Dr. Ashok Kumar Patra.

v) Howrah Krishi Vigyan Kendra participated in 'Millet Mela' organized by the Black Cat Commando at the NSG RH, Kolkata campus on 18th January 2025.

PURBA MEDINIPUR KRISHI VIGYAN KENDRA (2024)

Purba Medinipur KVK, under the administrative control of Bidhan Chandra Krishi Viswavidyalaya, was established on 21.06.2016 to cater the need of the farming community of Purba Medinipur district. The main mandate of this Krishi Vigyan Kendra is technology assessment and demonstration for its application and capacity development. A huge number of farmers, inputs dealers, rural youth, farm women of Purba Medinipur district visit and participate in KVK training programme, workshop, and advisory services on regular basis. KVK is considered to be technological and resource hub of the district and entrusted to be the lighthouse of the farming community, often features demonstration units to showcase and promotes various agricultural technologies and practices, including crop production, animal husbandry, horticulture, and more.

Demonstration units developed by Purba Medinipur KVK for technology show case:

- Pond based Integrated farming system unit
- Low cost poly house for high value vegetable cultivation (2 no.)
- Low cost poly tunnel for vegetable seedling production (1 no.)
- Medicinal plant block (1 no.)
- Mushroom production unit (1 no.)
- Compost and vermin compost production unit (1 no.)
- Dragon fruit progeny block
- Crop cafeteria (1 no.)

➢ **Programmes conducted in the year 2024:**

Sl. No.	Name of the programme	Number	Participants/ beneficiary
1.	One day training programme	178	4790
2.	Drone demonstration training programme	3	89
3.	More than 3 days duration skill development training programme (ICAR 100days 7, DRDC 4 & STRY 2)	13	380
4.	On Farm Trial (OFT)	9	63
5.	Front Line Demonstration (FLD)	23	909
6.	Others Extension Activities (Field day, Kisan Mela, Kisan, Ghosthi, exhibition, film show, method demonstrations, farmers seminar,group meetings, Lectures delivered as resource persons, Advisory Services, Scientific visit to farmers field, farmers visit to KVK, diagnostic visits, exposure visits, animal health camp, soil test campaigns, celebration of important days Swatchta Hi Sewa, Mahila Kisan Divas, special days observation	694	22368
7.	DAESI programmes	2	80



JHARGRAM KRISHI VIGYAN KENDRA (2024)

The KVK is located at Kadamkanan, Jhargram,(22.2721° N, 87.0035° E) under the Red and Lateritic Zone of West Bengal.


Technological intervention of Jhargram KVK through different approaches during 2024

Sl. No.	Activities	Magnitude
1.	On Farm Trial	5Nos.
2.	Front Line Demonstration	22.65 ha/ 347 participants
3.	Other extension activities (Field day, advisory service, diagnostic visits, kisan mela, scientific visit to farmers field etc.)	276 Nos./2607 participants




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.

The detail of the DAESI courses conducted upto 2024:

Name of the NTI	No of batch completed	Ongoing batch	Total participants	Resource generation (Rs.in Lakh)
FACC	12	2	560	112.00
Hooghly KVK	11	1	480	96.00
Nadia KVK	10	1	440	88.00
Howrah KVK	10	1	440	88.00
PurbaMedinipur KVK	6	2	320	64.00
Total	**49**	**7**	**2240**	**448.00**

DIRECTORATE OF FARMS

The Directorate of Farms at Bidhan Chandra Krishi Viswavidyalaya presently manages 13 farms across different agro-climatic zones, encompassing a total area of 1,257 acres. The farms operate with a vision to support teaching, research, and production of quality seeds of various crops, including Breeder, Foundation, and Certified classes**.** The newly introduced varieties are projected to achieve a Seed Replacement Rate (SRR) of at least 60% within the next 3–4 years.

Production and Revenue

The Directorate has been actively engaged in the production of quality seeds and planting materials for various crops. The production and revenue details for the year **2024–25** are summarized below:

Production of seed in quintals

Year	Paddy	Pulse	Oilseed	Jute	Elephant foot yam	Turmeric	Sapling production	Revenue Generation (Rs.)
2024-25	3180	161	14	1	35	83	14500	10471088

Maize crop cultivation at AB-DSF, Kalyani

Seed sale from Farm

Crop cultivation at C block farm, Kalyani

Paddy cultivation at Chakdaha RRSS

Facility development

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. Farm mechanization plays a vital role in increasing agricultural productivity as well as lessen the cost of cultivation. 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. Solar light installation is another step towards eco friendly agriculture. We have installed many solar systems for illuminating farms at night as well as for irrigational purposes.

Solar Light for irrigational purposes at Mondouri Farm

Under Nirmal Bangla project we have developed many sanitary complexes both for women and men which immensely help the visitors, farmers and students.

Sanitary complex under Nirmal Bangla Project

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 4 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.

Pond developed for fish cultivation

Fruit trees contribute to the environment in many ways by providing oxygen, improving air quality, ameliorating climate, conserving water, preserving soil, and supporting revenue generation through fruit production. Keeping this in view, about **9 acres** of mango, mosambi, jackfruit, cashewnut, coconut, arecanut, and litchi plantations were developed during this year across different farms of BCKV.

Development of coconut plantation at the side of Farm road

Mango orchard developed at C Unit Farm

Coconut production at Mondouri Farm

Technology Transfer and Farmer Engagement

The Directorate of Farms actively disseminates innovative agricultural technologies to farmers through 5 hands-on training programs conducted across different districts of West Bengal, One Field Day organized at BCKV farms and participation in 2 Krishi Melas, featuring stalls with farm produce, seed displays, and agricultural literatures. These initiatives aim to bridge the gap between research and practice, enhancing adoption of modern agricultural practices among farmers.

At Krishi Mela

CENTRAL LIBRARY

The Central Library of Bidhan Chandra KrishiViswavidyalaya 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, providing ample space for collections, user services, and academic activities.

The Central Library caters to the information and learning needs of students, faculty members, scientists, research scholars, extension personnel, officers, and other staff members of the University. In addition, consultation facilities are extended to outside scholars, teachers, students of other universities, and alumni in accordance with 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 80910 + books, 1191 journals titles, 6260 loose journals and periodicals and **25,**043 volumes of bound journals, 40 popular magazine 6674 Ph.D. and M. Sc. thesis, more than 4457 reports, 826 Non-Book Materials and many other reference materials. In addition, the library maintains a wide range of reference sources and special collections supporting agricultural and allied sciences.

Electronic Resources:

The library is further enriched by its own subscription of e-books & databases and the vast collection of CeRA initiative of ICAR. The library is further enriched by its own subscription of e-books & databases and the vast collection of CeRA initiative of ICAR. 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 requestsreceived 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 throughnineteen well defined sections:

- Reference and Referral
- Computerized Circulation
- Current Awareness
- Book Bank
- Wi-Fi Facilities
- Current and Bound Journals (Print)
- Thesis and Dissertation
- Similarity Check for Plagiarism Detection
- Photocopy
- Audio-visual
- Internet Surfing
- Inter-Library Loan
- Database Search
- Online Electronic Books and Journals.
- Document Delivery Service Under CeRA

The physical footfall during the year 2024 was approximately 18,000 users**,** reflecting extensive utilization of library resources and services.

Electronic Resources

The Central Library is further strengthened by extensive electronic resources through its own subscriptions to e-books and databases, as well as through the CeRA (Consortium for e-Resources in Agriculture) initiative of ICAR. CeRA provides access to a vast collection of agriculture-related e-journals and high-demand e-books from leading publishers. Users can

access these resources through remote login facilities using individual user IDs and passwords.

Library Extension Activities:

The Central Library extends its role beyond conventional library services by undertaking various library extension and academic support activities, including:

- **Library Orientation Programmes**: Audio-visual demonstrations are organized every year for newly admitted students as part of the library orientation programme.
- **Document Delivery Request (DDR) Services**: Regularly provides DDR services to students and research scholars of other ICAR institutions and State Agricultural Universities through the CeRA platform.
- **Plagiarism Detection Services**: Mandatory similarity checking of M.Sc. and Ph.D. theses is carried out centrally to uphold academic integrity and research quality.
- **Library and Information Services (LIS) Course**: Conducts a common credit course on *Library and Information Services* for students as mandated by ICAR.
- **Theses Repository Development**: Soft copies of theses are regularly uploaded to the **Krishikosh** platform of ICAR to enhance global visibility of the University's intellectual output and strengthen agricultural knowledge networks.
- **Information Skill Development Training**: Organizes training programmes with live demonstrations on accessing online and offline learning resources in agriculture and allied sciences for University users and LIS students from other institutions.

Achievements and Recognitions

The Central Library, BCKV, received the "Highest Holding Award on Discovery Platform – 2023" in the Eastern Region from ICAR-CeRA, recognizing its outstanding contribution to resource development and knowledge dissemination.

In the academic year 2024-25 ICAR had selected BCKV from Eastern Zone of India, to host a prestigious seminar cum training program on CeRA. It was a great opportunity for the university to host such a grand training program for Central Library, BCKV on national level. The purpose of this training program was to sensitize trainees and make them aware of digital access to journal articles, books, research papers or any kind of research work for all the institutes falling under the ICAR umbrella. As BCKV was repeatedly awarded for DDR services in the past years, its from that dedication that ICAR-CeRA gave us the scope to conduct such a ambitious training programme which was held on 13th September, 2024 at FACC Kalyani. Library professionals and library administrators from almost all the Central Universities, SAUs and ICAR Institutes of Eastern India had participated in the program. ICAR-CeRA Authorities from New Delhi and Bangalore were present over there to make the programme successful and a great event.


J-Gate@CeRA
Regional Training
Awareness Workshop for

National Service Scheme

Activities of NSS, BCKV

Date	Programme	Activities
11/01/2024	Paying Homage to Swami Vivekananda and Netaji Subhas Chandra Bose	The programme was observed with the participation of students, teaching and non-teaching staff, dignitaries, and the Programme Coordinator. The Hon'ble Vice-Chancellor delivered an inspirational address, followed by cultural performances by students.
26/01/2024	75th Republic Day Celebration	The Hon'ble Vice-Chancellor hoisted the National Flag. The programme included addresses by university dignitaries and patriotic songs and recitations performed by students.
22/03/2024	Seminar on HIV, AIDS and Health Care	An awareness seminar was organized under the Red Ribbon Club. Lectures were delivered by the Hon'ble Vice-Chancellor, Dean, Faculty of Horticulture, Dean of Postgraduate Studies, and two eminent lady personalities. Students participated enthusiastically.
09/05/2024	Kobi Pronam	Cultural program on Rabindranath Tagore's birthday; performances and recitation by students and guest artists.
19/06/2024	NSS Advisory Committee Meeting	Strategic meeting with Regional Director, Deans, and university officials to discuss on the plan of work and funding of NSS, BCKV unit.
21/06/2024	Online Yoga Class	A virtual yoga session was conducted through Google Meet by a trained lady yoga instructor.
01/07/2024	National Doctors' Day	The birth and death anniversary of Dr. Bidhan Chandra Roy was observed in the presence of the Hon'ble Vice-Chancellor, students, and teaching and non-teaching staff.
12/08/2024	Best Programme Co-ordinator Award (2024-25)	Coordinator of NSS, BCKV unit awarded 'Best Programme Co-ordinator of Red Ribbon Club' on International Youth Day.
15/08/2024	Independence Day Celebration	The Hon'ble Vice-Chancellor hoisted the National Flag. The programme included addresses by the Vice-Chancellor and other university officials, followed by a student

		parade.
16/08/2024	Awareness Program on Hepatitis	Honorable Vice-Chancellor, Programmme Co- Ordinator, Programme officers of NSS, Teaching and non-teaching staffs and students were present in this special program. Awareness Lecture on Hepatitis was given by eminent doctor from AIIMS, Kalyani.
03/10/2024	Seminar on AIDs, Lifestyle and Well Being	The programme included an address by the Vice-Chancellor and a lecture by Mr. Suvash Kundu. Students and economically disadvantaged people from nearby areas participated. NSS officials and university authorities were also present.
25/11/2024	Apna Bharat Jagta Bangla	A special program observed by NSS, BCKV in presence of students, Program Co- ordinator. An encouraging speech by Prof. Shankar Acharya, Dean Post Graduate Studies, BCKV.
04/12/2024	Village Survey	NSS volunteers conducted a village survey in Khudra-Mohanpur, identifying issues related to water supply, drainage, electricity, and education. Positive observations were recorded regarding hygiene practices and school attendance.
05/12/2024	World Soil Day	A joint programme was organized by the Department of Soil Science, AICRP on Soil Test Crop Response, and NSS, BCKV, with active participation of students and faculty members.
11/12/2024	Bharatiya Bhasha Utsav	Cultural celebration by students and faculties.
13/12/2024	Blood Donation Camp	A blood donation camp was successfully organized by the Red Ribbon Club and NSS, BCKV Unit, during which 40 voluntary donors donated blood.
17/12/2024	Campus Cleaning Program	NSS volunteers carried out a campus cleanliness drive covering the administrative building and its surrounding areas.

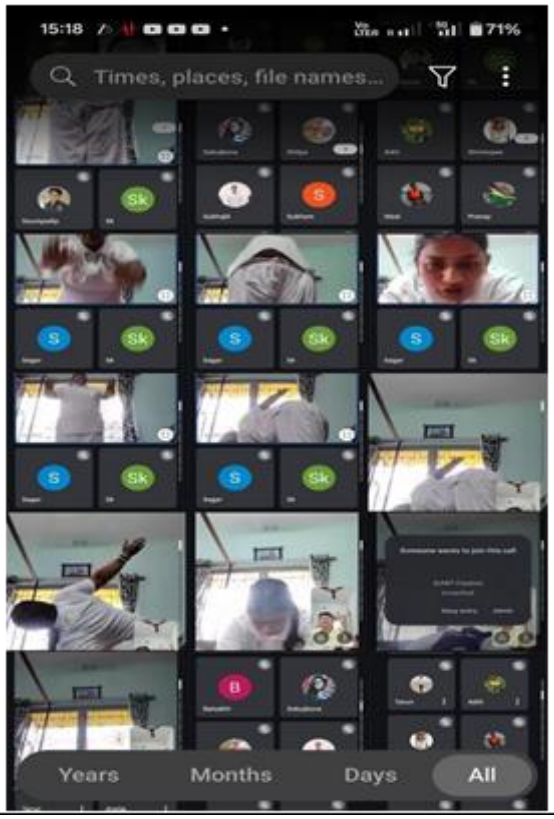

Celebration of National Youth Day / birthday of Swami Vivekananda


Celebrated by hoisting of National Flag on 75th Republic Day

Seminar on HIV, AIDS and Health Care

Kobi Pronam on birthday of Rabindranath Tagore

NSS Advisory Committee Meeting in presence of Regional Director



Online Yoga Class

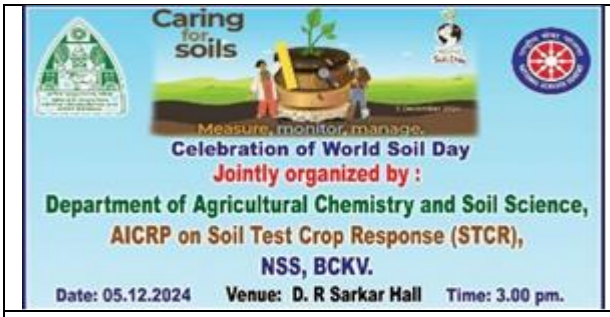
Celebration of National Doctors Day

Occasion of *international* Youth Day celebration

Observation of Independence Day

Celebration of Republic Day

Apna Bharat Jagta Bangla



World Soil Day

Bharatiya Bhasha utsav

Blood Donation Camp

Campus cleaning program

VILLAGE SURVEY BY NSS VOLUNTEERS

TECHNOLOGY DEVELOPED/ VARIETY DEVEOPED/ PATENT/ GEOGRAPHICAL INDICATION (2024-2025)

1. Geographical Indication of aromatic rice variety *Kalonunia*

"*Kalonunia*" is a traditional rice variety from the *Terai* region, known for its tall plants (145±5 cm) and late maturity (151±5 days). It has medium-sized, purple to black grains with long black awns. With hulling, milling, and head rice recovery rates of 75.9%, 67.3%, and 59.8%, respectively, it falls under the medium slender grain type. It contains 17.8% amylose, 7.5% protein, a moderate elongation ratio (1.64), and a medium strong aroma (score 2.35). It is commonly used to prepare table rice, viz, *Pulao*, *Payash*, and *Pitha*.

[*Source:* Geographical Indication No. 743, GI Certificate No. 538, 02.01.2024]

2. Inclusion of non-basmati aromatic rice under AGMARK

Under the 'Bengal Aromatic Rice' project, BCKV and UBKV submitted 116 *Gobindabhog* and 76 *Tulaipanji* samples between September 2015 and January 2016, and later, 84 *Radhunipagal*, 80 *Kataribhog*, and 17 *Badshabhog* samples from February 2018 to February 2021 to the Central Agmark Laboratory, Nagpur, Maharashtra, for grain quality testing. Based on the results, these five aromatic rice varieties—*Gobindabhog*, *Tulaipanji*, *Radhunipagal*, *Kataribhog*, and *Badshabhog*—were included in the Non-Basmati Aromatic Rice Grading and Marking Rules, 2024. They are now officially registered under AGMARK with three milled rice grade classifications: Special, Standard, and General.

[*Source:* The Gazette of India (No. 73, dated 31.01.2024)]

3. Registration of aromatic rice variety *Radhatilak* as Farmers' variety

Radhatilak is a traditional tall aromatic rice variety grown in limited areas of Nadia, Hooghly, and Purba Medinipur during the *kharif* season. It exhibits late heading (115–120 days) and matures in 140–150 days. The plant is tall (130–140 cm), lacks anthocyanin, and produces awnless, short grains (6.3 mm) with a very low test weight of 11.2 g. The kernels are white, short-bold in shape, with low amylose content (18.6%) and a medium strong aroma. This variety is commonly used to prepare *Bhog* (Cooked cereals offered to deity), *Payash*, and traditional sweetmeat like *pitha*.

[*Source:* Plant Variety Journal (Vol. 18, No. 2, 2024); Roy *et al.* (Oryza, Vol. 56, No. 3, 2019; Registration No. REG/2014/5, 12.06.2024 from PPV&FRA, Govt. of India)]

4. Efficacy of new fungicides in management of fusarium stalk rot maize diseases

The spraying of Fluopyram 21.37% + Trifloxystrobin 21.37% SC twice at a concentration of 0.20%, at 3 and 18 days after inoculation, resulted in the lowest disease severity (PDI of 32.8) and the highest yield (67.82 q/ha). This was followed by the application of Azoxystrobin 18.2% + Difenoconazole 11.4% SC at 0.10%, also applied at 3 and 18 days after inoculation, which recorded a PDI of 42.1 and a yield of 63.69 q/ha. The maize stalk rot diseases could effectively be managed by spraying of Fluopyram 21.37% + Trifloxystrobin 21.37% SC @ 0.2 % / Azoxystrobin 18.2% + Difenoconazole 11.4% SC at 0.10%, twice at initiation of the disease and at 15 days interval.

[*Source: Proceedings of 67th Annual Maize Workshop, Year 2024 Kharif, Page No. Pathology 56*].

5. Secondary and micro-nutrients based customized fertilizers for *taro*

Soil application of customized fertilizers at a rate of 600 kg/ha in three split doses such as first at two weeks after germination, second at one month later, and third one at one month after the second dose combined with foliar sprays of microfood (micronutrient mixture) at 5 ml/litre in three times like first at one month after germination and repeated twice at monthly intervals, resulted in enhanced crop yield (14.33 $t.ha^{-1}$) and a benefit-cost ratio of 2.61.

[*Source: ICAR-HS-CTCRI Technology-2024-016]*

6. Standardization of planting date and method of *Kaempferea galanga* (*Ekangi*)

Planting of *Ekangi* between 15 to 30 April at a spacing of 20 cm × 20 cm results maximum rhizomes yield (13.30 t. ha^{-1}) and oil yield (136.65 kg. ha^{-1}).

[*Source: 31st Annual Group Meeting, ICAR-AICRP on Medicinal and Aromatic Plants & Betelvine held on 7-9, February, 2024*]

7.* Integrated management of foliar diseases of *Aloe vera

Soil application of FYM at 1.0 $kg.m^{-2}$ enriched with *Trichoderma harzianum*, along with *Pseudomonas fluorescens* talc-based formulations at a dose of 2% during planting and at the onset of disease symptoms, followed by three foliar sprays of *P. fluorescens* (2% talc-based) and neem oil (0.3%), effectively reduced Aloe vera leaf spot incidence by 76% and soft rot by 43%. This treatment also led to a 23% increase in yield and achieved a cost-benefit ratio of 5.5.

[*Source: 31st Annual group meeting, ICAR-AICRP on medicinal and aromatic plants & betelvine held on 7-9, February, 2024*]

8. Arka Padma: A High Leaf-Yielding Betel Vine Variety Suitable for Closed System Cultivation in Assam and West Bengal

The betel vine variety *Arka Padma*, developed in collaboration with ICAR-IIHR, Bangalore, is a high leaf-yielding type with moderate pungency. It is well-suited for cultivation under closed systems and is recommended for the states of Assam and West Bengal.

[*Source: 31st Annual Group Meeting, ICAR-AICRP on Medicinal and Aromatic Plants & Betel vine held on 7-9, February, 2024*]

9. Variety developed in *okra*: Bidhan Sahebmukto (BCO-1)

The *okra* variety, "Bidhan Sahebmukto" has been developed by hybridization and selection from a cross between VRO-6 and Mukta. It is early maturing (within 45 days after sowing, DAS) and can easily be fitted in intensive cropping system. It gives 38.4% and 44% more yields as compared to local check and national check varieties, respectively. Pods are soft textured with less seeded and less pubescent, and highly resistant to *yellow vein mosaic virus* (YVMV) and tolerant to *Cercospora* leaf spot diseases and highly resistant to pod borer under field condition. The average yield is 102.71 q/ha. This variety is popular based on farmers' and consumers' points of view.

[*Source: Notified in The Gazette of India vide no. (SO 1362(E) dt. 12.03.2024*]

10. Management of root-knot nematode in rice

Nursery bed application of Biofor pf-2 at a dose of 20 $g.m^{-2}$ enriched with well-decomposed FYM (2 kg.200 kg^{-1} FYM, incubated for 15 days) significantly reduced root-knot index by 73% and final nematode population in soil. This treatment recorded the lowest root-knot index (1.55) and was found most effective for managing *Meloidogyne graminicola* in transplanted rice.

[Source: AICRP on Nematodes in Agriculture identified in Workshop Proceedings, Year-2024, Page No-16]

11. Management of root-knot nematode and bacterial wilt complex in brinjal

Soil application of *Bacillus subtilis* @ 2.5 kg. ha^{-1} along with 2.5 tons FYM.ha^{-1} significantly reduced *Meloidogyne incognita* population by 49.40% and increased brinjal yield by 40.06%, recording the lowest final nematode population of 387.5 (in 200 cc soil + 5 g root) and highest yield (20.1 t. ha^{-1}). This technology was found to be the most effective for managing the root-knot nematode and bacterial wilt (*Ralstonia solanacearum)* complex in Brinjal.

[Source: AICRP on Nematodes in Agriculture identified in Workshop Proceedings, Year-2024, Page No-16]

12. Management of root-knot nematode in green gram

Soil application of neem cake at a dose of 1.0 t.ha^{-1} combined with seed treatment with *Bacillus subtilis* at a dose of 10 g.kg^{-1} seed significantly reduced root-knot nematodes

(*Meloidogyne incognita)* population by 60.92% and increased yield by 59.46%, recording the lowest final nematode population (274.83.200^{-1} cc soil), lowest root-knot index (2.66), and highest yield (0.59 t.ha^{-1}). Therefore, soil application of Neem cake @ 1.0 t.ha^{-1} & seed treatment with *Bacillus subtilis* @ 10 g.kg^{-1} of seed was the best treatment for management of *Meloidogyne incognita* in green gram.

[Source: AICRP on Nematodes in Agriculture identified in Workshop Proceedings, Year-2024, Page No-16]

13. Management of root-knot nematode and fungal wilt complex in guava

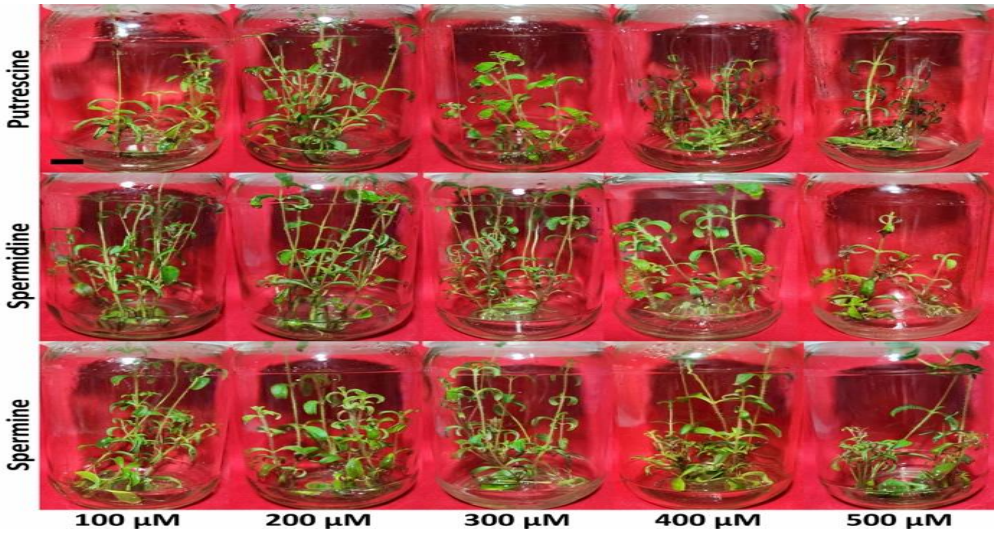
Soil application of *Pochonia chlamydosporia* at a dose of 30 ml. plant^{-1} combined with *Bacillus subtilis* at a dose of 30 ml. plant^{-1} and neem cake at a dose of 100 g.plant^{-1} reduced *Meloidogyne incognita* population in soil by 44.81% and increased yield by 25.55% over control, recording the lowest soil and root nematode population and highest ICBR after the standard check. This treatment was found the best for management of root knot nematode and fungal wilt complex in guava.

[Source: AICRP on Nematodes in Agriculture identified in Workshop Proceedings, Year-2024, Page No-16]

14. Development of protocol for *meta*-Topolin and polyamine-induced stevia and rebaudioside-A production

An accelerated high-frequency simultaneous monophasic micropropagation protocol for stevia using low-cost liquid medium was developed. Utilising the efficacy of meta-Topolin and putrescine, high-frequency shoot initiation, multiplication, proliferation, and rooting were achieved over other cytokinins and auxins. The earliest shoot-root formation, maximum shoot-root proliferation, and elongation, having maximum leaf count, were attained in MS medium supplemented with meta-Topolin (6.2 mM) + putrescine (200 mM). HPLC analysis indicated that micropropagated plantlets produced significantly higher (2.4-fold) rebaudioside-A in comparison to the mother plant. This protocol should be useful to meet the ever-increasing consumers' demand for stevia plantlets, a source of a commercially valuable natural sweetener.

[*Source: Published in South African Journal of Botany 159 (2023) 405-418; South African Journal of Botany 173 (2024) 34-45*].



Identification of Bidhan Stevia variant lines BSRV1 and BSRV2 with higher rebaudioside-A and stevioside (Plant Cell Tissue and Organ Culture 159: 34)

15. Identification of a WBL77-mutant, MM21, with Stemphylium blight resistance

A gamma-irradiated population was developed based on screening of almost 130000 M2 plants identified a tolerant lentil mutant, MM216. The multi-location trials revealed that MM216 showed an impressive and robust resistance; the selected mutant line could be recommended as a donor in the lentil breeding program against the pathogen globally. The selected mutants were advanced to M7 by screening in the field and challenged in controlled conditions with the pure pathogen isolate. A resistance mutant, MM216, with a per cent disease index (PDI) of <10, was identified where the mean of the check varieties, WBL 77, was >55. The selected mutant did not display any yield penalty.

[*Source: Published in International Journal of Radiation Biology 100 (2024) 1722-1730*]

16. Developed a new methodology (High A400/A1800 ratio) to identify genotypes with accelerated photoprotection recovery ability

Instantly measured A400/A1800 ratio by five minutes in flag leaves of 25 diverse genotypes strongly associated with the $\varphi PSII_{400}$-differences between theoretical and actual, qPd_{400} and NPQ_{400} with R^2 values 0.74, 0.65 and 0.60, respectively. GWAS of the A400/A1800 ratio identified the regions with genes reported earlier for plant photoprotection recovery. Additionally, QTL analysis in an RIL population also identified the regions carrying known genes related to photoprotection. Thus, the A_{400}/A_{1800} ratio can quickly phenotype many plants for easier introgression of the traits in popular cultivars. [*Source: Published in Rice (2024)* ***17****:62*].

17. Foliar nutrition of nano urea and urea phosphate to groundnut

The recommended doses of fertilizers (N: P: K @ 20:60:40 kg ha^{-1}) applied as basal followed by foliar application of 0.2% nano urea + 1% urea phosphate at flowering stage and peg

formation stage enhanced pod yield of groundnut at about 11.5 to 13% over 100 % RDF, where the B:C ratio was increased at a tune of 2.6 to 4.1% with twice application of foliar nutrition.

[Source: AICRP on Groundnut in Workshop Proceedings and Annual Report, Year: Kharif 2024, Page No: A 19-20]

18. Management of root knot nematode infecting tomato by nursery bed treatment with Neem cake

Nursery bed treatment with neem cake @ 2 t .ha^{-1} 15 days before sowing significantly reduced root knot nematode, *Meloidogyne incognita* infecting tomato in nursery bed with root knot index of 2.40 and final nematode population of 363.33 in 200 cc soil + 5 g root.

[Source: Proceedings of Annual Review meeting of AICRP Nematodes, 2024]

19. Release of Tuberose variety: Bidhan Snigdha (BR-1)

The tuberose variety Bidhan Snigdha (BR-1) has been developed from a parental combination of *Arka Nirantara* and *Prajwal* by the AICRP on Floriculture, BCKV. It is heat tolerant, photo insensitive and can be cultivated round the year for loose flower production. It has longer florets, slightly pinkish tinged, longer post-harvest life, suitable for garland making, decoration and long-distance transport. It showed moderate resistance against leaf spot disease and was immune to sclerotial wilt. It also showed lower root gall index in respect of root knot nematode. Average loose flower yield is 8.5-9.0 tonnes/Acre. It has been accepted well by the farmers of West Bengal and other States for loose flower production.

[Source: Govt. of India in the Gazette No. F.No.3-76/2024/SD-IV, dated 23th September, 2024]

20. Integrated management package for minimizing postharvest rot in elephant foot yam

Within one week of harvest of elephant foot yam, after removing any infected or damaged portions of the corms, dipping of healthy corms in a solution of the combination fungicide Carbendazim 12% WP + Mancozeb 63% at 2 g per litre of water for 10 minutes before storing protect the corms from postharvest rot and extend their storage life. This technology was jointly developed by ICAR-HS-CTCRI and BCKV.

[*Source: Certified by ICAR in 2024. UID No. ICAR- CTCRI Technology- 2024-018*]

21. Organic management package for minimizing postharvest rot in elephant foot yam

Removal of the infected/damaged portions of elephant foot yam corms after harvest and, within a week after harvest, dipping the corms in *Trichoderma asperellum* enriched cow dung slurry @ 5g/kg corm for 10 minutes before storing the corms helps to control rot while maintaining an organic approach to postharvest disease management. This technology was jointly developed by ICAR-HS- CTCRI and BCKV.

[Source: Certified by ICAR in 2024,UIDNo.ICAR-HS- CTCRI Technology- 2024-019]

22. Release of Tuberose variety: Bidhan Ujjwal (BR-2)

The tuberose variety Bidhan Ujjwal (BR-2) has been developed from a parental combination of *Sikkim Local* and *Phule Rajani* by the AICRP on Floriculture, BCKV. It has medium size florets, milky white florets, highly fragrant, longer post-harvest life and suitable for garland making. It has also great importance for cut flower production. It showed moderately resistance reaction against leaf spot disease and it was immune to Sclerotial wilt and it showed lower root gall index in respect of Root Knot Nematode. Average loose flower yield is 5-6 t. acre^{-1} and 1.8-2.0 lakhs spikes acre^{-1} year^{-1}. It has been well and other states for loose flower as well as cut flower production.

[*Source: Govt. of India in the Gazette No. F.No.3-76/2024/SD-IV, dated 23th September, 2024*]

23. Patent Granted

Development of nano-emulsion pesticidal formulation of *Pongamia pinnata for control of insect-pest*, for which a Patent has been granted by Patent office, Govt. of India (**Patent No. 526504)** to the Department of Agricultural Chemicals.

Facilities Developed during 2024-25

During the reporting period, significant progress was made in strengthening infrastructure, laboratory facilities, germplasm conservation, and field-based research units across various departments, AICRP centres, and research stations of the University. The major facilities developed and maintained are summarised below.

A. Laboratories

Sl. No.	Facility Development	Location	Details
1.	Laboratory facility (200 sq. ft.)	Dept. of Agricultural Chemistry & Soil Science	Established for precise analysis of sensitive chemical and biological parameters to support agricultural and environmental research.
2.	Laboratory	Dept. of Plant Pathology	Developed a mushroom laboratory for training in spawn production and mushroom cultivation.
3.	Plant Virus and Pathogen Diagnostics Laboratory	Dept. of Plant Pathology	Established a Plant Virus and Pathogen Diagnostics Centre for indexing seeds and planting materials of horticultural and field crops.
4.	Laboratory (Mites)	Dept. of Agricultural Entomology	Developed laboratory facilities for taxonomic and applied research on mites.
5.	Apiculture Laboratory	Dept. of Agricultural Entomology	Established an apiculture laboratory.
6.	Advanced Seed Testing Laboratory	Dept. of Seed Science & Technology	Developed an advanced seed testing facility to support breeder and quality seed testing.
7.	GI laboratory for aromatic rice	Dept. of Agricultural Biochemistry	Established a GI laboratory for research on aromatic rice landraces of West Bengal under RKVY.
8.	Laboratory (1,500 sq. ft.)	AICRP on Weed Management	Developed laboratory research facilities for weed management studies.
9.	Office-cum-Laboratory Facilities	AICRP on Chickpea	Developed laboratory facilities (250 sq. ft. and 300 sq. ft.) along with an office room (250 sq. ft.) to support chickpea research.
10.	Laboratory	AICRP on Wheat & Barley	Developed laboratory facilities to support wheat and barley research activities.
11.	Laboratory	AICRP on Fruits	Established an Entomology laboratory at Mohanpur.
12.	Laboratory (10 m × 10 m)	AICRP on MULLaRP	Developed laboratory infrastructure to support pulse-based research.

13.	Laboratory	AINP on Jute (AINP-JAF)	Developed laboratories for molecular studies in jute.
14.	Laboratory (22 ft × 12 ft)	RRSS, BCKV, Sekhampur	Established a laboratory for training in spawn production and mushroom cultivation.
15.	Laboratory	RRS (NAZ), Gayeshpur	Developed a laboratory (12 m × 6 m) with a capacity of 30 students.
16.	Strengthening of Molecular biology and bio-control laboratory	College of Agriculture, Burdwan	Developed a primary molecular biology laboratory.
17.	Strengthening of Molecular biology, Post-harvest, Soil and water testing, and Entomology laboratory	College of Agriculture, Bankura	Developed and strengthen laboratories for teaching and research purpose.
18.	Central Instrumental Facilities	College of Agriculture, Bankura	Developed RKVY-funded central facilities for physical, chemical, and biological analysis of soil and plant samples.

B. Germplasm Blocks and Gene Banks

Sl. No	Facility Development	Location	Details
1.	Germplasm blocks	Dept. of Genetics & Plant Breeding	Maintained diverse germplasm including rice (557), lathyrus (277), cowpea (40), chickpea (400), urdbean (114), mungbean (230), mustard (200), and lentil (1,479).
2.	In vitro germplasm	Dept. of Genetics & Plant Breeding	Maintained in vitro cultures of banana (G9), potato (six cultivars), stevia, gerbera, and mentha.
3.	Germplasm block	Dept. of Floriculture & Landscape Architecture	Maintained germplasms of marigold (18), lotus (20 cultivars), and sunflower (10 cultivars).
4.	Germplasm block	Dept. of Vegetable Science	Maintained germplasms of tomato, brinjal, chilli, fava bean, sponge gourd, cowpea, dolichos bean, and other vegetables.
5.	Germplasm block	AICRP on Maize	Maintained 500 maize germplasms.
6.	Field Gene Banks	AICRP on Tuber Crops	Maintained 425 germplasms of 15 tuber crops and seed corms of elephant foot yam.
7.	Germplasm blocks	AICRP on Wheat & Barley	Maintained wheat germplasms (300), breeding lines (443), and crosses (320).
8.	Germplasm block	AICRP on Cashew	Maintained and expanded cashew germplasm with 14 accessions.

9.	Germplasm block	AICRP on Floriculture	Tuberose (43,560 sq. ft, varieties–26), Marigold (43,560 10.sq. ft, varieties–20), Chrysanthemum (43,560 sq. ft, varieties–212), Gerbera (10,890 sq. ft, varieties–31), Orchid (10,890 sq. ft, varieties–11), Gladiolus (20,000 sq. ft, varieties–35), Gypsophylla (32,670 sq. ft, varieties–01), House Plant (30,000 sq. ft, varieties–100), Rose (10,000 sq. ft, varieties–188), Hibiscus (15,000 sq. ft, varieties–32), Bougainvillea (2,000 sq. ft, varieties–12), Dahlia (2,000 sq. ft, varieties–107).
10.	Germplasm block	AICRP on Chickpea	Maintained and evaluated 500 chickpea genotypes, including 280 reference lines from ICRISAT.
11.	Germplasm blocks	AICRP on Fruits	Developed germplasm blocks comprising 425 fruit varieties and collections.
12.	Germplasm blocks	AICRP on Vegetables	Maintained germplasm block of Teasle gourd (24 no.), Pointed gourd (39 no.), Tomato (65 no.), Dolichos bean (30 no.), Cowpea (25 no.), Brinjal (51no.), Chilli (42 no.).
13.	Germplasm block	AICRP on Plantation Crops	Dwarf varieties of coconut
14.	Germplasm block	AICRP on MULLaRP	Five pulse crops (Green gram, Black gram, Lentil, Lathyrus and Fieldpea) are grown in different seasons covering an area of 10000-20000 sq.m.
15.	Germplasm block	College of Agriculture, Bankura	Development of Germplasm block: About 165 rice landraces (915 sq.m)
16.	Germplasm block	Crop Research Unit	Maintained diverse 512 Rice and 279 Lentil genotypes. Developed and maintained six and two Recombinant Inbred Populations of rice and Lentil, each comprising>180 individual homozygous lines. Maintained *in vitro* cultures of banana (G9), potato (six cultivars), stevia, gerbera, and mentha.
17.	Forage Garden & Germplasm block	AICRP on Forage	Golden Jubilee Forage Garden (800 m sq) & Ricebean Germplasm block (250 germplasm, Area- 2000 m sq) & Lathyrus germplasm block (12 germplasm, 350m sq)
18.	Germplasm blocks	AINP on Jute	Maintained jute germplasm units with

			100 fibre lines and 200 seed lines.
19.	Germplasm block	RRSS (NAZ), Chakdah	Maintained 247 germplasm and breeding materials of mungbean Maintained 135 germplasm and breeding materials of urdbean Maintained 1400 germplasm and breeding materials of lentil Maintained 675 accessions and breeding materials of lathyrus Maintained 75 germplasm of rice Maintained 30 germplasm of scented rice for insect and disease reaction studies
20.	Germplasm block	RRSS, BCKV, Raghunathpur	Maintaining approximately two-hundred germplasm of Indian mustard
21.	Banana Germplasm Block (700 sqm)	RRSS, BCKV, Sekhampur	Conservation of regional banana cultivars.

C. Orchards, Plantations, and Protected Cultivation

Sl. No.	Facility Development	Location	Details
1.	Orchard	Dept. of Fruit Science	Established and maintained a banana orchard covering 1.5 acres.
2.	Orchards	AICRP on Fruits	Maintained banana orchards (1 acre) and experimental fruit plantations.
3.	Orchards	AICRP on Cashew	Maintained cashew orchards with 84 F_1 progenies.
4.	Mango In-situ Grafted Orchard	RRSS, BCKV, Sekhampur	Established a one-acre orchard of popular mango varieties.
5.	Banana Germplasm Block	RRSS, BCKV, Sekhampur	Conserved regional banana cultivars over 700 sq. m.
6.	Tea Plantation	RRSS, BCKV, Sekhampur	Established tea plantation comprising five varieties.
7.	Agroforestry Plantation	AICRP on Agroforestry	Developed Piya Sal–Sweet Orange agroforestry models over one hectare.
8.	Hydroponics System	Dept. of Fruit Science / AICRP on Fruits	Developed hydroponics systems with 900 planting spaces.
9.	Greenhouse	AICRP on Fruits	Developed greenhouse facilities at Mandouri.

D. Processing and Value Addition Facilities

Sl. No.	Facility Development	Location	Details
1.	Processing Units	Dept. of Post-Harvest Engineering	Established rice processing (Raiganj), oil processing (Mohanpur), and pulse/rice processing units (Ranaghat)

			under RKVY.
2.	Value Addition Centre	AICRP on Floriculture	Developed a model flower value addition and processing centre at Ranaghat with RKVY (RAFTAAR) support.
3.	Compost & Vermicompost Units	RRS (C&S), Kakdwip	Established compost and vermicompost sheds (capacity 100 TPA) and handed over for operational use.

E. Museums, Training and Support Facilities			
Sl. No.	**Facility Development**	**Location**	**Details**
1.	Insect Museum	AICRP on MULLaRP	Developed an insect museum for teaching and extension.
2.	Crop Museums	Colleges of Agriculture, Burdwan & Bankura	Maintained crop museums covering 24 crops and diversified collections.
3.	Training Facilities	Various Departments & RRSS	Conducted training on mushroom cultivation, spawn production, vermicompost and biofertilizer production, and seed testing.
4.	Fish Ponds	RRSS/RRS, Raghunathpur	Developed ponds for tilapia culture, fingerling production, and composite fish culture.
5.	ICT-enabled Classrooms	University Campus	Developed PowerPoint-enabled classroom facilities for UG teaching.
6.	Office Infrastructure	Colleges and AICRP Units	Developed office chambers and administrative facilities to support academic and research activities.

Health Centre

The Health Centre of Bidhan Chandra Krishi Viswavidyalaya (BCKV) continued to provide essential healthcare services to students, staff, and their dependents during the year. Free medical consultation, basic diagnostic services, and essential medicines were provided to students, while staff and their family members availed medical services at nominal charges.

FACILITIES AND SERVICES:

- Consultancy /expertise opinion. Students, staff and their family members are directly seen and addressed by the University Doctor, BCKV, Health Centre.
- First aid and emergency care, including dressing of wounds and burns under sterilised conditions
- Spply of available medicines to the students only.
- Diagnostic facilities including X-ray, ECG, and pathological-cum-biochemical investigations (i. Lipid profile, ii. Thyroid hormones, iii. Uric acid and iv. Other hormonal assays
- Nebulisation and oxygen inhalation facilities
- 24×7 university ambulance service

VARIOUS MEDICAL ACTIVITIES:

- Health Centre, of Bidhan Chandra Krishi Viswavidyalaya 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 and various other medical necessities with the available resources of this centre.
- On an average of around 60 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.
- Medical examination of newly admitted undergraduate and postgraduate students was conducted as per university norms.

Diagnostic Strengthening

The diagnostic infrastructure of the Health Centre has been progressively strengthened through the phased procurement of modern equipment. In 2008, key diagnostic facilities including an Auto Analyser, Computerised ECG Machine, and X-ray Unit were established with support from the ICAR Student Amenities Grant, enabling routine and emergency diagnostic services. Further augmentation was achieved in 2010 with the addition of a Haematological Auto Analyser and an Ultrasonography Unit, enhancing the Centre's diagnostic coverage. Subsequently, the conventional X-ray system was upgraded to a Digital X-ray Unit in 2016, resulting in improved diagnostic precision, faster reporting, and enhanced patient care services.

The dispensing counter of the BCKV Health Unit

Statistics about services in the year 2024

No. of Patients seen per day 2024 (Calculated on average basis):

Students:

Patients	Working days	Monthly	Yearly
18	26	18 X26 = 468	468 X 12 = 5616

Staff:

Patients	Working days	Monthly	Yearly
6	26	6 X 26 = 156	156 X 12 = 1872

Pathological Investigation:

Patients	Working days	Monthly	Yearly
3	26	3 X 26 = 78	78 X 12 = 936

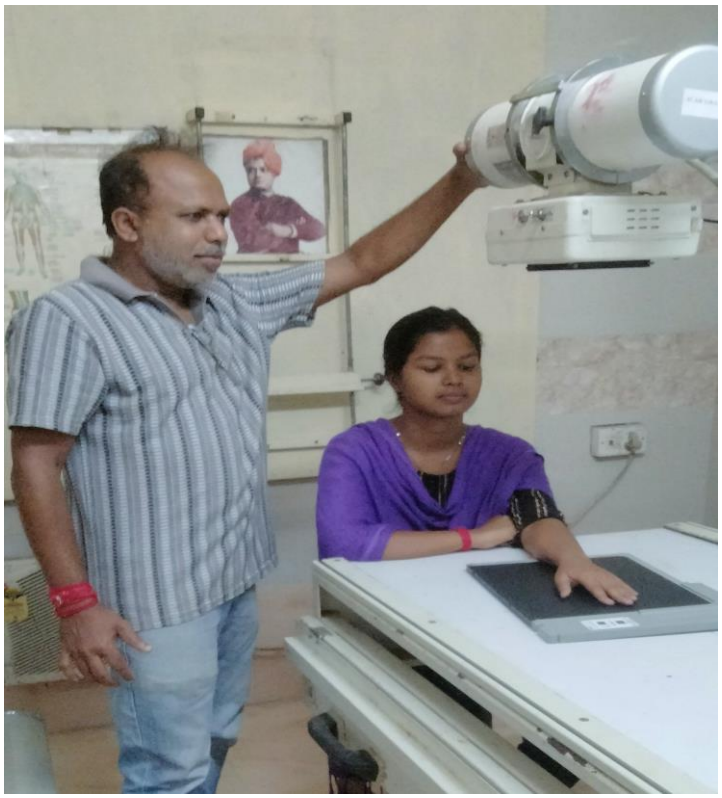
X-Ray:

Patients	Working days	Monthly	Yearly
2	26	2 X 26 = 52	52 X 12 = 624

ECG:

Patients	Working days	Monthly	Yearly
1	26	1 X 26 = 26	26 X 12 = 312

Pathological unit of BCKV Health Centre



X-Ray unit of BCKV Health Centre

Placement Cell Activities

Placement cell of the University is constituted by the Chairman (Senior professor) and the Secretary, Faculty Council of Agricultural Engineering as coordinator. Placement Cell regularly update the job positions in different sectors and the information is circulated in the university website as well as campus circulation. As per the advertisement of the Agrochemicals and other private companies/ NGOs and private sectors, the selection is done through interviews (offline and online) by the respective organizations.

Details of agencies/organisation where students got placement

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	0	7	4	7	1	22
2.	Faculty of Horticulture	Mohanpur, Nadia	0	1	1	2	0	7
3.	Faculty of Agricultural Engineering,	Mohanpur, Nadia	0	0	2	2	0	5
Total			**0**	**5**	**5**	**11**	**1**	**34**

List of M.Sc. Thesis Submitted at BCKV 2024

Faculty of Agriculture

Agronomy

Sl. No.	Name of the students	Thesis title	Name of the Chairman
1	PRIYA DHARA	Rationalization of nitrogen management in transplanted and direct-seeded *Kharif* paddy (*Oryza sativa* L.)	Prof. P. Bandopadhyay
2	PRABAHA MAITY	Impact of different seaweed saps in enhancing yield and quality of *Kharif* rice in new alluvial soil	Prof. K. Brahmachari
3	MAINAK SARKAR	Response of aromatic rice (cv. Gobindabhog) to organic manure and leaf colour chart-based top dressing in Gangetic alluvial soil.	Prof. M. Ghosh
4	SHEIKH MUJIB AHMED	Effect of chemical weed management on transplanted winter paddy in the new alluvial zone of West Bengal	Prof. B. C. Patra
5	SANJU MONDAL	Performance of transplanted maize as affected by age of seedling and weed management practices in new alluvial zone of west bengal	Prof. B. C.Patra
6	MADHURIMA DATTA	Effect of Nano-urea on growth, yield and quality of fodder maize (*Zea mays* L.)	Dr. K. Jana
7	TANMOY SAHA	Effect of foliar application of nano urea and urea on growth and yield of *Kharif* rice (*Oryza sativa* L.)	Prof. D. Dutta
8	PRERONA SAHA	Standardization of leaf colour chart-based top dressing for black-husked aromatic rice cultivars in lower Gangetic plains	Prof. M. Ghosh
9	SHATABDI BARMA	Effect of nano urea and seaweed extract in combination with conventional nitrogen fertilizer on growth of *Kharif* maize	Prof. D. Dutta
10	SUNETRA GHOSH	Response of varieties and nitrogen fertilizer management on productivity and quality of dual- purpose oat (*Avena sativa* L.)	Dr. K. Murmu
11	ANASUYA CHATTERJEE	Effect of integrated nutrient management on growth and yield of green gram (*Vigna radiata* L. Wilczek)	Dr. S. Mondal
12	ASHIK MAMUN	Effect of different concentration and time of application of paclobutrazol on growth and yield of sesamum (*sesamum indicum* L)	Prof. S. K. Gunri
13	SANTANU KAYAL	Effect of soil application of mycorrhizal biofertilizer on growth and yield of *Kharif* rice (*Oryza sativa* L.)	Dr. Md. Hedayetullah
14	ROHAN SHARMA	Performance of summer growing soybean (*Glycine max* L. Merrill.) varieties under the application of foliar grade water soluble nitrogen and potassium fertilizer after potato	Prof. S. K. Gunri
15	MAINAK DEY	Effect of nano urea in rice hybrids (*Oryza sativa* L.) during kharif season under new alluvial zone of West Bengal	Prof. M. Ray
16	AKSITA PAUL	Effect of herbicide management on weed dynamics, growth and productivity in summer green gram (*Vigna radiata* (L.))	Dr. S. Maji

17	RAJARSHI MANDAL	Evaluation of hybrids and high yielding varieties of rice (*Oryza sativa* L.) in new alluvial zone of West Bengal during *Kharif* season	Prof. M. Ray
18	AKASH GHOSH	Effect of botanical biostimulants on growth, Yield and Grain Quality of *Kharif* Rice (*Oryza sativa* L.) under Organic Nutrient Management	Prof. M. Pramanick
19	SUCHITRA KARJEE	Evaluation of weed management and zinc fertilization in various rice establishment methods	Dr. R. Poddar
20	NIKITA DAS	Effect of sowing date, variety and nutrient management on finger millet in new alluvial zone of West Bengal	Dr.S. Banerjee
21	AKASH SARKAR	Growth and yield of rice cultivars as influenced by foliar feeding of nano urea and Zn under varying NPK schedules	Prof. S. B. Goswami
22	SK MOINUDDIN	Effect of nano-DAP on the growth and productivity of potato (*Solanum tuberosum* L.) in inceptisols	Dr.S. K. Das
23	SPANDAN SASMAL	Performance of baby corn (*Zea mays* L.) varieties under varying nutrient levels in *Kharif* season	Dr. S. Biswas
24	RITIKA DAS	Effect of weed management practices on weed dynamics, growth and yield of chickpea (*Cicer arietinum* L.)	Dr. S. Sarkar
25	DEBADRITA DAS	Influence of boron and urea on growth and yield of niger (*Guizotia abyssinica*) in Gangetic plains of West Bengal	Prof. C. K. Kundu
26	BEAUTI BARMAN	Effect of foliar application of sulphur, boron and water soluble fertilizer on growth and yield of safflower (*carthamus tinctorius* l.) in alluvial zone of West Bengal	Prof. C. K. Kundu
27	SUNNY UL AKTAR	Performance of tossa jute (*Corchorus olitorius* L.) under various weed management practices	Dr. S. Das

Plant Pathology

1	ARKADEEP SARKAR	Characterization and management of *Fusarium* head blight, an emerging disease of wheat in West Bengal	Dr. R. Mandal
2	DEBARGHA PATRA	Studies on the epidemiology and management of sheath blight and brown spot diseases of rice	Prof. B. Panja
3	MANDIRA BERA	Morpho-molecular characterization of leaf blast pathogen of ekangi (*Kaempferia galanga* L.) and evaluation of botanicals and bioagents for their efficacy against the pathogen *in vitro*	Prof .G. Mondal
4	DHRUBAJYOTI SARKAR	Isolation and identification of endophytes antagonist to soil borne diseases of lentil (*Lens culinaris* M.)	Dr. S. Mahapatra
5	SOUVIK SAMANTA	Molecular detection and characterization of Begomovirus infecting important vegetables (okra, tomato, lablab bean and chilli) in West Bengal.	Prof. J. Tarafdar
6	ALIMPIA SANTRA	Evaluation of different types of formulations of *Trichoderma asperellum* on lentil plant health and collar rot management	Dr. S. Murmu
7	SUMAN DAW	Occurrence of leaf spot diseases in potato and their management	Prof. A. Chakraborty
8	BISWADIP SARKAR	Detail account on diseases of maize caused by *Fusarium* sp. with special reference to *Fusarium equiseti* and its management under *in-vitro* condition	Dr. S. Debnath

9	MOUSUMI PRADHAN	Interactive effect of yeast and *Trichoderma* isolates with some fungal pathogens causing diseases of maize .	Dr. A. Roy
10	ANUPAM PRATIHAR	Integrated management of leaf curl disease of tomato	Dr. A. K. Mandal
11	SANGAM CHOWDHURY	Evaluation of native *Trichoderma* for disease management and plant growth promotion in lentil	Dr. S. Mahapatra

Agricultural Chemistry & Soil Science

1	ABHISHEK SARKAR	Evaluation of methods of application doses an forms of biofertilizers in field pea	Prof. S. C. Kole
2	ARGHA MANDAL	Nature of phosphate sorption in a few soil orders of West Bengal	Prof. A. Debnath
3	ARKAPRAVA SEN	Effect of organic manure and moisture regime on dynamics of available phosphorus and sulphur in a lateritic soil	Prof. H. Saha
4	DEBNATH SARKAR	Studies in soil fertility and plant nutrition in a long-term experiment with integrated nutrient management	Prof. K. Bhattacharyya
5	PARTHA DEY	Impact of coated urea & methods of rice cultivation on inorganic sulphur fraction in summer rice	Prof. P. K. Mani
6	PIYAS PATRA	Effect of integrated nutrient management on uptake and use efficiency of nitrogen in green gram (*Vigna radiata*) grown in Inceptisol	Dr. K. Batabyal
7	SAYAN MANDAL	Bacteria mediated *in situ* rice straw decomposition	Prof. N. Saha
8	SAYANTAN MANDAL	Spatial variability of soil properties and delineation of management zones for major tea growing areas of Jalpaiguri district, West Bengal	Dr. S. Saha
9	SRABASTI URBI	Characterization of gonpur micro watershed at Mohammad Bazar block in birbhum district (West Bengal) based on study of some soil physicochemical properties	Prof. S. K. Ghosh
10	SUBHAMAYEE MANDI	Assessment of *Azotobacter* abundance in aromatic rice field in lower gangetic plains of West Bengal	Prof. T. Biswas
11	SUBHRADIP SAHA	Indexing of some important chemical properties of soils of Birbhum and Jalpaiguri districts	Dr. S. Murmu
12	SUMAN JANA	Soil water stress and use pattern of wheat (*Triticum aestivum* L.) under tillage and irrigation management	Prof. P. K. Bandyopadhyay
1	SHARMISTHA MANDAL	Population dynamics of predatory mites on major fruit crops of West Bengal	Prof. K. Karmakar
2	DEBABRATI ROY	Effect of nutrient management on incidence and damage of important pests in safflower (*Carthamus tinctorius* L.) under common plant protection schedule	Prof. S. Chakraborti
3	NAYANIKA PAUL	Taxonomic study, population dynamics and biorational management of *Aceria tulipae* infesting garlic	Dr. P. Debnath
4	SURANJANA SAHU	Morphology, population dynamics and sampling methods for assessing population of citrus thrips	Prof. A. Pramanik
5	SUDIP DAS	Evaluation of some guava varieties against root-knot nematode (*Meloidogyne incognita*) and their management through bioagents	Dr. A. Das

6	PRITAM BERA	Studies on major pest complex infesting tomato (*Lycopersicon esculentum* Mill.) in the Gangetic plains of West Bengal	Dr. A. Sarkar
8	JAYA PURKAYIT	Studies on insect pests associated with dolichos bean (*Lablab purpureus* L.) in the lower Gangetic plains of West Bengal	Dr. A. K. Maiti
9	SUNITA HANSDA	Efficacy of some novel insecticides against major pests infesting *Kharif* pulses	Dr. A. Banerjee
10	RITWIK PAL	An investigation on role of *Aceria mangiferae* (Acari: Prostigmata) for formation of mango malformation	Dr. A. Kar
11	ARNAB SINGHA	Study on mite fauna associated with pulse crops with special reference to life table study of *Oligonychus biharensis*	Dr. S. C. Bala
12	RITAN MODAK	Assessment of consequences of chemical interference on arthropod complex in groundnut ecosystem	Prof. A. Mukhopadhyay
13	BAPPADITYA MONDAL	Seasonal incidence of brinjal shoot and fruit borer (*Leucinodes orbonalis* Guenee) and its chemical management along with dissipation study	Dr. S. K. Ghosh
		Plant Physiology	
1	N S SUBIR RANJAN	Effect of cadmium stress on growth and biochemical parameters at early seedling stage of wheat (*Triticum aestivum* L.)	Prof. A. K. Pal
		Agricultural Statistics	
1	KRISHNAKALI ROY	Construction of row-column factorial designs using incidence matrices of incomplete block designs	Prof. A. Majumder
1	BITANGSHU BISWAS	Molecular characterization, de-fluoridation, and P-solubilization efficiency of a novel fluoride-tolerant bacterial isolate	Dr. Md. N. Ali
		Seed Science and Technology	
1	TAMALIKA MAITI	Effect of biostimulant on seed production and storability in tomato	Dr.S. K. Bordolui
2	HIMADRI BARMAN	Application of priming for quality enrichment of lentil seeds	Prof. P. Chakraborti
		Agricultural Extension	
1	ABHISHEK ROY	Uncertainty and chaos in rural livelihood: The livelihood transformation dynamics in rural Bengal	Prof. S. K. Acharya
2	SHREYA BARUI	Understanding farmer to farmer extension concept and its application through bibliometric analysis	Prof. D. Basu
3	SAMRIDDHI SAMADDAR	A comparative study among different potato varieties with reference to cost of cultivation and profit in Purba Bardhaman district	Prof. S. Mondal
4	TANMAY DAS	Resilience analysis in terms of productivity, income and wage in agriculture	Prof. A. Biswas
5	SRIJAN MAITY	Occupational shift in coastal areas due to climate change and insatiable marginal return	Dr .T. K. Mandal
6	AKASH KHAMRAI	Occupational migration in farm ecology : the socio-economic status of toto-pullers	Prof. S. K. Acharya
		Genetics and Plant Breeding	
1	SHILPA	Idantification and analysis of shade responsive leaf	Prof. S.

	MUKHERJEE	number improving QTLs in Rice	Bhattacharyya
2	OLIVE GHOSH	Field evaluation and molecular confirmation of collar rot (*Sclerotium rolfsii*) in lentil (*Lens culinaris* Medik.)	Dr A. Das
3	OINDRI PAL	Characterization and genetic diversity analysis of some micronutrients (Fe & Zn) rich advanced breeding lines of wheat	Dr. A. Maji
4	PAYEL BHANJA	Appraisal of genetic variability for grain physical, hydration traits and starch content in mungbean [*Vigna radiata* (L.) Wilczek]	Dr. G. S. Mandal
5	KSHITIZ RAI	Identification of high tillering putative mutants in rice cv. Shatabdi and the effects on grain yield and quality.	Dr. S. Sarkar
6	BISWARUP PATI	Morpho-physiological and biochemical dissection of diverse linseed genotypes under terminal heat stress	Prof. S. Mukherjee
7	ADYA KUMARI	Morpho-phenetic, biochemical and molecular insights of terminal heat stress in lentil (*Lens culinaris* Medik.)	Dr. A. Das
8	YUVARAJ S	Morpho-molecular characterization and diversity in seed traits of some advanced breeding lines in wheat (*Triticum aestivum* L.)	Dr.A. Maji
9	SANJAY KUMAR	Studies on genetic variability for yield and its attributing characters in rice (*Oryza sativa* L)	Dr. D. Saren
		Agricultural Economics	
1	DEBARCHANA BHOWAL	An Analysis of technical efficiency for potato and rice farms of Hooghly district of West Bengal	Prof. B. K. Bera
2	SAJEDUR RAHAMAN	A study on extent of rural livelihood diversification in Uttar Dinajpur district of West Bengal	Prof. B. K. Bera
3	GOKULA KANNAN K	Economic feasibility of coconut cultivation in Thanjavur district of Tamil Nadu India	Dr. S. Chatterjee
4	SOUMYARANJAN PARIDA	A comparative economic analysis of marigold cultivation vs. conventional crop cultivation in Khordha district of Odisha	Prof. S. Mukhopadhyay
5	SUSMIT BISWAS	Economic study on Pesticide use in West Bengal	Prof. A. K. Nandi
6	SURYASHIS HALDAR	A study on economics of cultivation of okra and cucumber in South 24 Parganas district of West Bengal	Dr. G. Dey
		Faculty of Horticulture	
		Plantation, Spices, Medicinal, and Aeromatic Crops	
1	MRIGANKA BASU	Germplasm evaluation for growth, yield and quality of fenugreek (*Trigonella foenum-graecum* L.) in the new alluvial zone of West Bengal.	Prof. A. Pariari
2	ANIKET MANDAL	Dynamics of yield and quality in garlic as influenced by seaweed (*Ascophyllum nodosum)* extract	Prof. A. B. Sharangi
3	DEBLEENA DAS	Effect of nano urea on growth and yield of ginger under coconut plantation	Prof. A. Bandyopadhyay
4	KAVERI PATIL	Impact of seaweed extract on growth and yield of turmeric cv. Pragati	Prof. N. Chattopadhyay
		Floriculture & Landscaping	
1	AYAN PRADHAN	Standardization of planting time of chrysanthemum (*Chrysanthemum morifolium* Ramat.) cv. white star and yellow star for cut flower production in naturally ventilated polyhouse in Gangetic plains of West Bengal	Dr. T. K. Chowdhuri

2	ANWESA BHUSAN	Morphological, biochemical and molecular diversity analysis in *Clitoria ternatea* L.	Dr. J. Majumder Sarkar
3	ESHA PAUL	Effect of seaweed on growth, flowering and bulb production in tuberose (*Polianthes tuberosa* L.) cv. Arka Prajwal as ratoon crop	Prof. A. K. Pal
4	SHREYA MANDAL	Varietal evaluation of chrysanthemum (*Chrysanthemum morifolium* Ramat.) for the cut spray flower production	Dr. T. K. Chowdhuri
5	PRANAB NIRMALYA DAS	Effect of salicylic acid and 8-HQC as vase solution and pulsing treatment in extending post harvest longevity of cut flower stems of cv. Dana Ellen	Dr. S. S. Gantait
		Post Harvest Management	
1	AVIK KIRAN GHOSH	Studies on effects of spacing and harvest maturity on yield and quality of cassava and elephant footyam	Prof. S. Mitra
2	SOMU GARAI	Studies on some aspects of salt and vinegar based mixed vegetable pickle	Prof. I. Chakraborty
3	FAIJAL AL KAJI	Effect of potassium metabisulphite and potassium chloride on green chilli powder	Dr. P. K. Thakur
		Fruits Science	
1	AVISHEK DUTTA	Effect of foliar spray of calcium and some micronutrients on plant growth, precocious flowering and fruit set in juvenile guava plants (*Psidium guajava* L.)	Prof.S.K. Sarkar
2	ALOK BERA	Effect of sucker management in banana cv. champa (AAB) in gangetic plains of West Bengal	Prof. F. K. Bauri
3	SUMON ROY	Studies on morphological, biochemical, floral and yield variations of different dragon fruit (*Hylocereus* sp.) varieties	Prof. M. A. Hasan
4	MOUSUMI KISKU	Phenological studies of dragon fruit (*Hylocereus costaricensis*) at new alluvial zone of West Bengal	Dr. D. Majhi
5	SAHELI GHOSH	Characterization and evaluation of some promising varieties of mango grown in new alluvial zone of West Bengal.	Prof. S. Kundu
5	NITESH KUMAR MEHER	Evaluation of half-sib population of *Litchi chinensis* sonn. var Bombai for morphological traits under new alluvial zone of West Bengal	Prof. K. Chakraborti
6	VIKASH KUMAR	Effect of physical and chemical mutagens on seed germination, seedling vigour and morphological characters in guava cv. Dudh khaja in West Bengal	Dr. S. Debnath
		Vegetable Science	
1	RANIT ROY	Effect of ripening mutant "*rin*" gene in tomato	Prof. P. Hazra
2	SRIJANA SAHA	Inheritance of ripening mutant *nor* gene in tomato	Prof. P. Hazra
3	NABAKUMAR BHUNIA	Studies on growth, yield and processing qualities of sweet pepper under protected condition	Prof. A.R. Mandal
4	AYANTIKA MAITY	Inheritance pattern of anthocyanin content in okra through segregating generation	Dr. C. Karak
5	KOUSHIK RAY	Enhancing cost-efficient soilless spinach-beet (*Beta vulgaris* L.var. *bengalensis*) production under different substrates	Prof. U. Thapa
6	SANJITA MARANDI	Effects of different growing conditions for growth,	Dr. C. Karak

		yield and quality of onion	
7	SABIHA NAZ	Performance of cabbage hybrids for growth, yield and quality	Dr. P. Choudhurir
8	AUROLIPSA PANDA	Identification and characterization of putative mutants in cowpea [*Vigna unguiculata* (L.) Walp.] in M2 and M3 generations	Prof. M. K. Pandit
		Faculty of Agricultural Engineering	
		Farm Machinery and Power Engineering	
1	SAMBOWDEB BURMAN	Modification of a commercially available power weeder for increasing its efficiency	Prof. P.S. Chattopadhyay
2	DIBAKAR DAS	Comparative analysis of inverted T-type and shovel type furrow openers in Instrumental soil bin	Prof. S. Karmakar
3	DIPPRIYA MONDAL	Development of Power Tiller Operated Jute Seed Drill	Prof. P.S. Chattopadhyay
		Processing and Food Engineering	
1	BIPASHA DAS	Evaluation and comparative analysis of quality attributes of aromatic rice grains	Dr. K. Dhali
2	SOURADEEP SARKAR	Process technology for development of beetroot powder	Prof. P. K. Sahoo
3	SUMAN MONDAL	An internet of things (IoT) measurement and monitoring system for some greenhouse parameters	Dr. B. Chakraborty

List of Ph. D. Thesis Submitted at BCKV 2024

FACULTY OF AGRICULTURE

	Name	Title	Name of the chairman
	AGRICULTURAL CHEMISTRY & SOIL SCIENCE		
1	AGNIBHA SINHA	Determination of permissible limits of arsenic in soil and irrigation water contributing towards rice grain and dietary risk	Prof. Kallol Bhattacharyya
2	KAUSHIK SAHA	Nitrogen dynamics in soil under longterm fertility experiments	Dr. Koushik Batabyal
3	PARIJAT BHATTACHARYA	Characterization of bioavilability and ensuring nutritional security of zinc through biofortification of Rice	Prof. Kallol Bhattacharyya
4	JOY DUTTA	Sulphur availability in soils and its nutrition of crops grown under conservation agriculture	Prof. D. Sarkar
5	SK MD. ASIF	Behaviour of some organic P compounds in soil and phosphorus availability to greengram	Prof. A. Debnath
6	SANJAY HALDER	Mycorrhizal influence on micronutrient availability in soils for maize under varying levels of phosphorus	Prof. K. Bhattacharya
7	ABIR CHOUDHURY	Soil health and crop quality under the influence of fly ash	Dr. S. Murmu
8	TITAS SARKAR	Microbial activities and population dynamics under integrated nutrient management of mungbean in rice mungbean cropping system	Prof. S. C. Kole
9	NYAPE BAM	Drip irrigation and nutrient management on crop and water productivity in indian jujube (*Zizipus mauritiana* Lamk.)	Prof. S. K. Patra
10	NARENDRA KUMAR BHARATI	Role of Zn solubilizing microorganism vis a vis Zn availability in rice soils	Prof. N. Saha
11	ARUP SEN	Liquid inoculant formulations of phosphate solubilizing bacteria isolated from acid soil	Prof. N. Saha
12	BUDDHADEB SARKAR	Impact of coated urea on nitrogen and carbon pools in soil under different rice establishment methods	Prof. P. K. Mani
	AGRONOMY		
13	DIVYA MARY PYNGROPE	Varietal performance and nutrient management of coloured-husked aromatic rice in eastern India	Prof. M. Ghosh
14	MAHAFUZAR RAHAMAN	Performance of Rice-Rapeseed-Black gram cropping system under conservation agriculture practices.	Prof. Mahadev Pramanick
15	TANMOY BHOWMIK	Effect of crop establishment methods and varietalinteraction of Rice under Rice-Grasspea cropping system in the coastal zone of West Bengal	Prof. Koushik Bhramhachari
16	PRIYA DAS	Growth and yield of groundnut (*Arachis hypogaea* L.) as influenced by basal and foliar application of bio stimulants under new alluvial zone of West Bengal	Dr. K. Murmu
17	SHRABANTI MAITY	Effect of tillage and weed management practices on rice rapeseed cropping system and residual effect on green gram in new alluvial zone of West Bengal	Dr. S. Sarkar

18	MANIMALA MAHATO	Effect of nano fertilizers of potato (*Solanum tubersum* L.) under various irrigation schedules	Prof. D. Dutta
19	SUKANYA DUTTA	Evaluation on performance of rice -potato-pumpkin cropping system under conservation agriculture system	Dr. Kanu Murmu
20	KONATHALA KUSUMAVATHI	Effect of crop establishment methods and weed management practices in *Kharif* rice followed by chickpea	Dr. S. Sarkar
21	GAYATRI DEB	Effect of integrated managemnet of nitrogen along with zinc on aromatic rice(cv. Gobindabhog) and greengram as succeding crop in new alluvial zone of West Bengal	Prof. S. Pal
22	LALATENDU NAYAK	Influence of sulphur, zinc and boron on rabi sunflower (*Helianthus annuus* L.) And their residual effect on summer groundnut (arachis hypogea l.) In alluvial soil	Prof. C.K. Kundu
23	SHILPI BERA	Performance of rice-maize-cowpea cropping system under conservation agriculture practices	Dr. S. Sarkar
24	JALADHAR GORAIN	Development of organic gobindabhog rice-based cropping system in new alluvial zone West Bengal	Prof. M. Ghosh
		AGRICULTURAL STATISTICS	
25	ADARSH V S	A statistical study on volatility of small cardamom market	Prof. P. K. Sahu
26	ANKITA DUTTA	A study on the optimal designs for covariate models in block design set up	Prof. A. Majumder
27	MOUPIYA ROY	Construction of balanced and optimal crossover designs or repeated measurements designs for uncorrelated observation	Prof. A. Majumder
28	BIKRAMJEET GHOSE	Modeling and forecasting of non-stationary and non-liner time series data	Prof. P.K. Sahu
29	PRAMIT PANDIT	Modeling-forecasting and market cointegration study of major agricultural produce under diverse agro-climatic scenario	Prof. P. K. Sahu
30	GOWTHAMAN. T	The study of recurrent neural network models for selected pulses price forecasting in major indian markets	Prof. B. Bhattacharaya
31	ELAKKIYA N	Application of soft computing techniques for modeling major exporting spices production in india	Prof. B. Bhattacharaya
32	JIT SANKAR BASAK	Construction and combinatorial properties to optimal supersaturated design	Prof. A. Majumder
		AGRICULTURAL ENTOMOLOGY	
33	SAAYAN SAMANTA	Incidence of major insect pests of green gram and black gram , their varietal susceptibility and rational management under coastal saline zone of West Bengal	Prof. A. K. Sanapati
34	AYAN DAS	Host plant resistance against important pests of cucumber (*Cucumis sativus* L.) And their rational management	Prof. S. Chakraborti

35	PUSHPENDU SAMANTA	Role of organics, bio-agents, botanicals and chemical nematicides in rice plants infested with *Meloidogyne graminicola* Golden and Birchfield	Prof. G. Chakraborty
36	NIRANJAN MANDI	Studies on bio-ecology and eco-friendly management of pulse beetle, *Callosobruchus chinensis* L. on bengal gram	Dr. S. Ghosh (Mondal)
		AGRICULTURAL BIOTECHNOLOGY	
37	MOONMOON SARKAR	Stimulation of charantin biosynthesis in cell and callus cultures of *Momordica charantia* L.	Prof.N.Mandal
		GENETICS AND PLANT BREEDING	
38	SUDIP BHATTACHARYA	Genetic analysis of grain Fe and Zn accumulation in early maturing small seeded lentil (*Lens culinaris* Medik.)	Dr. Arpita Das
39	SUDESHNA PANJA	Selection of rice (*Oryza sativa* L.) genotypes for breeding high yielding drought tolerant lines	Prof. S. Bhattacharaya
40	DEBARPITA DATTARAY	Identification and genetic analysis of rice genotypes responsive to conservation agriculture	Dr. S. Sarkar
41	CHANDAN KISHORE	Comparative studies on alloplasmic and euplasmic heterosis in Brassica juncea L. for important quantitative and oil quality traits	Prof. P. Kr. Bhattacharyya
42	SOURAV HAZARI	Genetic analysis of fibre yield and quality of two cultivated species of jute	Prof. A. Roy
43	SHAMBA GANGULY	Genome analysis of yield enhancing traits of rice (*Oryza sativa* L.) under low light intensity	Prof. P. Kr. Bhattacharyya
		AGRICULTURAL BIOCHEMISTRY	
44	TADELA SUSMITHA	Nutritional and antioxidative properties of some selected raw and processed indigenous aromatic rice	Prof. A. Bhattacharya
		PLANT PATHOLOGY	
45	ANSHU KUMAR	Development of Effective bioformulation and optimized delivery system of efficient native plant growth promoting rhizobacteria against soil-borne diseases of tomato and brinjal.	Dr A. Roy Barman
46	GOSKULA KIRAN	Studies on morphological, cultural and biochemical parameters of wild edible mushrooms of West Bengal	Dr. R. Sharma
47	SHISHIR RIZAL	Determination of relationship between incidence-severity, genotypes-environment interaction and yield loos in lentil-foliar blight patho-system	Dr. Poly Saha
48	BHANOTHU SHIVA	Diseases and pathogen dynamics in rice-maize-cowpea and rice-potato-pumpkin agriculture cropping systems under a regime of conservation agriculture practices	Prof. S. Dutta
49	AMITAVA MONDAL	Morphological, molecular and biochemical studies on *Ganoderma* spp./ strains from West Bengal	Dr. R. Sharma
		PLANT PHYSIOLOGY	
50	PRAVACHAN CHETTRI	Growth regulation and physio-biochemical attributes of cherry tomato (*S. lycopercicum* Mill. var *cerasifome*) growth under soil-less culture as influenced by Triacontanol and Nitrobenzene.	Dr. Sanjoy Shil

51	DEBJANI DUTTA	Physiological implication of terminal heat and drought stress in wheat and its mitigation by application of boron and cytokinin	Prof. A. K. Pal
52	SNEHASHIS KARMAKAR	Physiological implication of terminal drought stress in maize and its mitigation by application of potassium nitrate and cytokinin	Prof. A.K. Pal
53	PRAGUN PAL	Physiological approach for biofortification of zinc in lentil (*Lens culinaris* Medik.)	Dr. S. Mondal
		AGRICULTURAL EXTENSION	
54	DEVAYAN CHATTERJEE	Assessment of the adoption of innovative jute production technology in selected districts of West Bengal	Prof. S. Mondal
55	SAIKAT SAHA	Determinants of farmers crop and cropping system choice in a selected farming situation of new alluvial zone of West Bengal	Prof. D. Basu
56	MANOBHARATHI K	Enterprise ecology and entrepreneurial behaviour of moringa (*Moringa oleifera*) growers in Karur district of Tamilnadu and some participatory responses from West Bengal: a structural and functional interpretation	Prof. S. K. Acharaya
57	MANI BHUSHAN	Assessment of readaibility in hindi language and its application in promotion of technology through extension communication intervention	Dr. H. Jana
58	SHASHIKANT DIVAKAR	Awareness perceptions and interventions towards nutri-smart agriculture in Bihar	Prof. D. Basu
		SEED SCIENCE AND TECHNOLOGY	
59	MUKESH KUMAR	Studies on seed development pattern and quality traits in okra [*Abelmoschus esculentus* (L.) Moench.]	Prof. P. Chakraborti
		AGRICULTURAL ECONOMICS	
60	GARGI MANDAL	Economics of betelvine cultivation and marketing in Purba Medinipur district of West Bengal	Prof. A. Maity
		SOIL AND WATER CONSERVATION	
61	ANIRBAN BHOWMIK	Impacts of agricultural land use and monsoon on hydrological properties and fertility of soil at micro watershed level	Dr. Panda
		AGRICULTURAL METEOROLOGY AND PHYSICS	
62	GOPAL DUTTA	Impinging of varied regional climate on production constituent and secondary metabolism of important medicinal plants	Prof. G. Saha
63	NABAJYOTI DEKA	Influence of agroclimatic variables on growth, yield and population dynamics of mites and thrips of chilli	Prof. G. Saha
64	DEBOLINA SARKAR	Monitoring soil salinity and surface water dynamics of Indian Sundarban region using satelite data and electromagnetic survey	Prof. M. K. Nanda
65	DEBJYOTI MAJUMDER	Variation of summer rice productivity under different past and future GCMs driven scenarios through Oryza 2000 model in new alluvial zones of West Bengal	Prof. Lalu Das
66	SUGNIK DAS	Impact of modified thermal and radiation regimes on growth, yield and quality of potato (*Solanum tuberosum* L.)	Dr. A. Mukherjee

		AGRICULTURAL CHEMICALS	
67	TILAK MONDAL	Development of polymer-based carbendazim formulation and evaluation of its bio-efficacy and environmental safety	Dr. R. K. Kole
68	SAYAN PAN	Comparative assessment of pesticide residue in organic and conventional rice and development of plant based bio-pesticide for organic agriculture	Dr. R. K. Kole

FACULTY OF HORTICULTURE

		POST HARVEST TECHNOLOGY	
1	ABID HAYAT	Studies on value addition of Marigold flowers	Prof. S. Chakraborty
2	NGUYEN THANH TUNG	Pre-and post-harvest treatments to improve chillling tolerance and prolong storage life of mango fruits cv. Cat chu	Prof. S. Mitra
		VEGETABLE SCIENCE	
3	GAYATRI SINHA	Characterization and genetic analysis of pointed gourd (*Trichosanthes dioica* Roxb.) clones	Prof. Arup Chattopadhaya
4	BALAGONI MARUTHI	Genetic analysis of yield, yield contributing components and tolerance to YVMV and OELCV diseases in okra (*Abelmoschus esculentus* L. Moench)	Dr. Sibsankar Das
5	PANIGRAHI PRATYUSHA BHAGAYATI	Assesssment of genetic variability, character associationship and influence of weather parameters on growth and yield of faba bean (*Vicia faba* L.) genotypes	Prof. M. K. Pandit
		FRUIT SCIENCE	
6	KIRAN HIRALAL RATHOD	Effect of different pre-harvest treatment on yield, quality and post harvest life of litchi (*Litchi chinensis* Sonn.cv. Bombai).	Dr. Debolina Majhi
7	SUBRATA MAHATO	Studies on the diversity of underexploited fruits in red and laterite zone of West Bengal.	Dr. Fatik Kumar Bauri
8	SANJUKTA BANIK	Organic amendment and application of geo-textile mulch for quality fruit production in mango cv. Himsagar grown in new alluvial zone of West Bengal	Prof. P. Dutta
9	SUSMITA DEY	Eco-friendly technologies for organic production of dragon fruit (*Hyalocereus costaricensis*) grown in new alluvial zone of West Bengal	Prof. P. Dutta
10	SWAPAN KUMAR PANIGRAHI	Studies on phenological behaviour of guava varieties/cultivars under the climatic condition of gangetic West Bengal	Prof. S.S. Sarkar
11	TANMOY MONDAL	Morphological biochemical, molecular characterization of jackfruit (*Artocarpus heterophyllus* Lam.)	Dr. Fatik Kumar Bauri
		FLORICULTURE AND LANDSCAPE ARCHITECTURE	
12.	KALYAN CHETTRI	Establishment of callus culture of *Rosa* spp. and studies on elicitor-mediated enhancement of anthocyanin from callus.	Dr.Jayoti Majumder (Sarkar)
13.	LOPAMUDRA JENA	Effect of growing media, growth regulators and nano-fertilizers on production of *Anthurium* cv. Tropical red	Dr. Tapas Mandal
14.	MEIKAM ICHANCHA	Floral biology, cross compatibility and priming in	Dr. Subhendu

		tuberose (*Polianthes tuberosa* L.)	Shekhar Gantait
15.	KARISHMA MAHERUKH	Performance study of *Curcuuma alismatifolia* Gangnep. in response to gibberellic acid and paclobutrazol	Dr. Arun Kumar Pal
16.	TUSHAR GHOSH	Performance of tuberose (*Polyanthes tuberosa* L.) cv. Prajwal in response to organic manure and bio stimulants	Dr. Arun Kumar Pal
17.	TANUSHREE KOLEY	Clonal propagation and diversity analysis of *Hibiscus* spp.	Dr.Jayoti Majumder (Sarkar)
		PLANTATION,SPICES,MEDICINAL AND AROMATIC CROPS	
18.	DUPPALA GOWTHAMI	Studies on integrated nutrient management of curry leaf and ginger grown as spice based cropping system	Prof. D. K. Ghosh
19.	LUWANGSHANGBAM JAMES SINGH	Germplasm evaluation and micronutrient management for growth, yield and quality in ginger (*zingiber officinale* Rosc.)	Prof. A. Pariari

List of Ph. D. Thesis Submitted at BCKV 2024
Faculty of Engineering

	Name	Title	Name of the Chairman
		FARM MACHINERY AND POWER	
1	SUNIL KUMAR	Power tiller operated strip till multi crop plenter for coservation agriculture	Prof. Subrata Karmakar
		POST HARVEST ENGINEERING	
2	MUKUL SAMADDER	Process Optimization for Production of Dehydrated Mango Powder	Prof. Souti Mukherjee
		SOIL AND WATER ENGINEERING	
3	SMRITI HANSDA	Groundwater Potential analysis of north 24pgs district of West Bengal using remote sensing and GIS approach	Dr. Alivia Chowdhury

Publication Summary

Research papers with NAAS score during 2024					Total
> 10	**7.5-10**	**5-7.5**	**< 5**	**Peer-reviewed journal (non-NAAS category)**	
23	74	140	44	32	314
Book	Book chapter	Other publication ((technical bulletin/ proceedings / abstracts popular article/booklet):			
36	64	28			128

NAAS (Above 10):

1. Begam, A., Pramanick, M., Dutta, S., Paramanik, B., Dutta, G., Patra, P. S., Kundu, A., & Biswas, A. (2024). Inter-cropping patterns and nutrient management effects on maize growth, yield and quality. *Field Crops Research, **310*:** 109363. (NAAS: 12.15)
2. Biswas, S., Das, R., Jana, K., & Puste, A. (2024). Integrated nutrient management on oat + grasspea intercropping system: An evaluation of system productivity, economics, energetic and carbon footprint. *Scientific Reports, **14*:** 19414. (NAAS: 11.0)
3. Biswas, T., Ishizaka, A., Majumder, A., Mandal, B., Dey, S., Mukherjee, S., & Acharya, S. K. (2025). The PROMETHEE-GAIA: A multi-criteria decision-making method for identifying best conservation agricultural practices. *Soil and Tillage Research, **245*:** (NAAS: 12.8)
4. Bose, P., Ray, M., Patra, P. K., Dasgupta, S., Saha, K., Sen, A. & Hossain, A. (2025). Different organic and inorganic sources of plant nutrients influence soil health, leading to improve the productivity and profitability of a fourteen-year long-term rice–potato–groundnut cropping pattern. *Applied and Environmental Soil Science***1:** 9943996. (NAAS 10.40/IP 2.7)
5. Chettri, T., Majumder, J., Mahanta, M., Mitra, M., & Gantait, S. (2024). Genetic diversity analysis and molecular characterization of tropical rose (*Rosa* spp.) varieties. *Scientia Horticulturae, **332*:** 113243. (NAAS: 10.34)
6. Das, S., Sengupta, S., Patra, P. K., & Dey, P. (2024). Limestone and yellow gypsum can reduce cadmium accumulation in groundnut (*Arachis hypogaea*): A study from a three-decade old landfill site. *Chemosphere, **353*:** 141645. (NAAS: 14.94)
7. Datta, S., Chhandagi, S., Barman, M., Chakraborty, S., Ahmed, T., Poorvasandhya, R., & Tarafdar, J. (2024). First report of *Rhynchosia* yellow mosaic virus (RhYMV) infecting butterfly pea (*Clitoria ternatea*) in India. *Plant Disease*. https://doi.org/10.1094/PDIS-10-24-2175-PDN (NAAS: 10.61)
8. Eradasappa, E., Mohana, G. S., Poduval, M., Sethi, K., Aneesa Rani, K. M. S., Lourdusamy, S., Velmurugan, M., Manjusha, M., Raviprasad, T. N., & Anilkumar, C. (2024). Analysis of stability for nut yield and ancillary traits in cashew (*Anacardium occidentale* L.). *Scientific Reports, **14*(1):** 2127. (NAAS: 11.0)
9. Ganguly, S., Namitha, K., Saha, S., Sinha Mahapatra, N., Bhattacharya, K., Kundu, R., Ganguly, S., Sen, P., Saha, A. K., Purkayastha, S., Bhattacharyya, P. K., Biswas, T., & Bhattacharyya, S. (2024). Identification and analysis of low light responsive yield enhancing QTLs in rice. *Scientific Reports, **14*:** 21011. (NAAS: 11.0)

10. Haque, A., Deb, C. K., Gole, P., Karmakar, S., Dheeraj, A., Shah, M.U.D., Dutta, S., Prasanna M. K., and Marwaha, S. (2025). An enhanced vision transformer network for efficient and accurate crop disease detection, *Expert Systems with Applications*, ***283:*** 127743, (NAAS: 14.67)
11. Koh, K. S., Ismail, M. F., Naharudin, N. S., Gantait, S., & Sinniah, U. R. (2024). Harnessing the potential of transverse thin cell layer culture for high-frequency micropropagation of Thai ginseng (*Kaempferia parviflora* Wall. Ex Baker). *Industrial Crops and Products*, ***213*****:** 118375. (NAAS: 12.45]
12. Lavanya, V., Das, A., Nayak, A., Chawla, Y., Dasgupta, S., Weindorf, D. C., Li, B., & Chakraborty, S. (2024). Digital soil mapping of available phosphorus using a smartphone-integrated RGB imaging device and ascorbic acid extraction method. *Smart Agricultural Technology*, ***9:*** 100501. (NAAS: 12.30]
13. Manna, T., Nanda, M. K., Sarkar, S., Mukherjee, A., Ray, M., Alkeridis, L. A., Sayed, S., Gaber, A., & Hossain, A. (2024). Infrared thermometry-based stress indices as indicators of yield performance and seasonal evapotranspiration in potato plants grown under different moisture and potassium regimes. *Scientia Horticulturae*, ***330*****:** 113086. (NAAS: 10.34)
14. Mohanty, S., Saha, S., Saha, B., Asif, Sk. Md., Poddar, R., Ray, M., Mukhopadhya, S. K., & Hazra, G. (2024). Substitution of fertilizer-N with biogas slurry in diversified rice-based cropping systems: Effect on productivity, carbon footprints, nutrients and energy balance. *Field Crops Research*, ***109*****(242):** (NAAS: 12.15)
15. Moulick, D., Majumdar, A., Choudhury, A., Das, A., Chowardhara, B., Pattnaik, B. K., & Hossain, A. (2024). Emerging concern of nano-pollution in agro-ecosystem: Flip side of nanotechnology. *Plant Physiology and Biochemistry*, ***211*****:** 108704. (NAAS: 11.44)
16. Nazneen, H., Das, R., Das, A., Dutta, S., Bhattacharya, S., Patar, S., Roy, S., Gupta, S., & Kumar, S. (2024). Disease spectrum and its molecular characterisation in the lentil production system of lower-Indo Gangetic plains. *Frontiers in Plant Science*, ***15*****:** 1199016. (NAAS: 12.63)
17. Parihar, A. K., Hazra, D., Lamichaney, A., Gupta, D. S., Singh, A. K., & Das, A. (2025). Eco-phenological drivers of black gram (*Vigna mungo* (L.) Hepper) productivity in diverse environments and their implications for crop improvement. *Field Crops Research*, ***322*****:** 109756. (NAAS: 11.60)
18. Purkait, A., Hazra, D. K., Kole, R. K., Mandal, S., Bhattacharrya, S., & Karmakar, R. (2024). Harnessing the carrier solvent complexity of crop biostimulant liquid formulations using locally available transesterified waste cooking oil: Economic recycling, solvent performance, and bioefficacy evaluation. *Journal of Agricultural and Food Chemistry*, ***72*****(2):** 1017–1024. (NAAS: 11.90)
19. Raha, P., Khatua, I., Saha, G., Adhikari, S., Gantait, S., & Bandyopadhyay, T. K. (2024). Morpho-histology of co-occurrence of somatic embryos, shoots, and inflorescences within a callus of *Limonium* 'Misty Blue'. *Physiologia Plantarum*, ***176*****:** e14389. (NAAS: 11.08)
20. Saha, S., Adhikari, A., Ghosh, P. K., Shaw, A. K., Roy, D., Choubey, S., Basuli, D., Tarafder, M., Roy, S., & Hossain, Z. (2024). Untying arsenite tolerance mechanisms in contrasting maize genotypes attributed to NIPs-mediated controlled influx and root-to-shoot translocation, redox homeostasis and phytochelatin-mediated detoxification pathway. *Chemosphere*, ***362*****:**142647. (NAAS: 14.94)

21. Saha, S., Mahapatra, N. S., Bhattacharya, K., & Bhattacharyya, S. (2024). The Ratio of A400/A1800 mapping identifies chromosomal regions containing known photoprotection recovery-related genes in rice. *Rice*, ***17*:** 62. (NAAS: 11.64)
22. Singh, P. K., Singh, A., Kumar, V., Sadhukhan, R., Jha, R. K., Siddiqui, M. H., & Khan, S. (2025). Agromorphological and biochemical characterization of mutagen-induced M3 mutant lines of grasspea. *Scientific Reports*, ***15*:** 5110. (NAAS: 11.0)
23. Singh, S., Gupta, A., Mishra, H., Srivastava, S., & Patra, P. K. (2024). Vetiver grass cleans up arsenic contaminated field for subsequent safe cultivation of rice with low arsenic in grains: A two-year field study. *Science of The Total Environment*, ***923*(3):** 171491. (NAAS: 16.75)

NAAS (7.5-10.0):

1. Acharya, B., Pradeep Kumar, P., Hazra, S., Dutta, S., Saha, S., Roy, S., Maji, A., Chakraborty, I., Chattopadhyay, A., & Hazra, P. (2024). Genetic control of important yield attributing characters predicted through machine learning in segregating generations of interspecific crosses of tomato (*Solanum lycopersicum* L.). *Acta Physiologiae Plantarum*, ***46***(8):78. (NAAS: 8.60)
2. Adhikari, B., Roy, A., Reddy, H., Roy, D., Das, C., Ghosh, D., & Bhattacharyya, S. (2024). Identification and analysis of gamma-irradiation-induced *Stemphylium* blight tolerant lentil (*Lens culinaris*) mutant. *International Journal of Radiation Biology*, ***100:*** 1722–1730. (NAAS: 8.60)
3. Adhikary, K., Mandal, T., Majumder, J., Choudhuri, T. K., Mukherjee, S., & Maherukh, K. (2025). Examine the impact of green-synthesized nanomaterials on the germination rates and seedling characteristics of African marigold (*Tagetes erecta* L.). *Heliyon*, ***11***(3): e42319. (NAAS: 10.00)
4. Alika N, Zhimo, S. K. Pal and S. Saha (2024) Release kinetics and plant availability of potassium in soils of eastern India. *Communications in Soil Science and Plant Analysis*, ***55***(16): 2367-2378. (NAAS 7.80)
5. Asif, Sk. Md., & Debnath, A. (2024). Adsorption kinetics of organic phosphates on goethite and aluminium oxide: The equation used to describe the reaction. *European Journal of Soil Science*. (NAAS: 10.00)
6. Banerjee, P., Venugopalan, V., Nath, R., Gaber, A., & Hossain, A. (2024). Dynamics of growth, physiology, radiation interception, production and quality of autumn blackgram (*Vigna mungo* L. Hepper) as influenced by nutrient scheduling. *PLS:* 1–22. (NAAS: 9.40)
7. Barrow, N. J., Asif, Sk. Md., & Debnath, A. (2024). Reaction of organic phosphates with oxides: Effects on pH, the equation used to describe the reaction, and on desorption. *European Journal of Soil Science*. https://doi.org/10.1111/ejss.13462 (NAAS: 10.0)
8. Barrow, N. J., Parvin, S. A., & Debnath, A. (2024). The effects of pH on phosphorus utilisation by chickpea (*Cicer arietinum*). *Plant and Soil*, ***495***: 663–673. (NAAS: 9.90)
9. Bhattacharya, P., Sengupta, S., & Bhattacharyya, K. (2024). Cationic micronutrient fractions in some tropical alfisols and inceptisols as affected by organic amendments and simulated moisture regimes: An incubation study. *Journal of Plant Nutrition*, ***47***(10): 1527–1545. (NAAS: 7.60)
10. Biswas, B., Ghosh, T., Chakraborty, D., Banerjee, S., Nath Mandal, B., & Saha, S. (2024). Modelling the impact of different irrigation regimes and mulching on strawberry crop growth and water use in the arsenic-contaminated Bengal basin. *Scientific Reports*, ***14***: 9586. (NAAS: 9.80)
11. Biswas, T., Majumder, A., Dey, S., Mandal, A., Ray, S., Kapoor, P., Emam, W., Kanthal, K., Ishizaka, A., & Matuka, A. (2024). Evaluation of management practices in rice–wheat cropping

system using multicriteria decision making methods in conservation agriculture. *Scientific Reports*, ***14*:**8400. (NAAS: 9.80)

12. Borah, T. R., Dutta, S., Barman, A. R., & Ray, S. K. (2024). Genetic diversity and virulence variability of *Sclerotinia sclerotiorum* in Eastern and northeastern India. *PLoS ONE*, ***19***(11): e0312472. https://doi.org/10.1371/journal.pone.0312472 (NAAS: 9.70)
13. Bose, S., Hazra, S., Hazra, P., Chattopadhyay, A., Maji, A., Basfore, S., & Karak, C. (2024). Characterization of gynoecious-parthenocarpic and monoecious cucumber lines (*Cucumis sativus* L.) and regression modelling to obtain high yielding and functionally rich genotypes. *Horticulture, Environment and Biotechnology*, ***65***(3): 465–476. (NAAS: 8.40)
14. Chakraborty S,Mahapatra S, Hooi A,Bhushan BT, Almansour MI, Ansari MJ, Hossain A (2024) Survey, isolation and characterisation of *Bipolaris sorokiniana* (Shoem.) causing spot blotch disease in wheat under the climatic conditions of the Indo–Gangetic plains of India, *Heliyon*, ***10***(22)**:** e40398 [NAAS 10.0)
15. Chakraborty, S., Mahapatra, S., Hooi, A., Alam, S. H., Kumar, S., & Kashyap, P. L. (2024). Insights into the influence of partial disease resistance components on host preference of *Bipolaris sorokiniana* in wheat. *Journal of Plant Pathology*, ***106***(3):1247–1258. (NAAS: 8.2)
16. Chatterjee, A., Ghosh, P., Winkler, B., Vijayaragavan, V., Debnath, S., Cichocki, J., Trenkner, M., Vanicela, B., Riethmueller, C., Walz, M., Chandra, S., & Pal, H. (2025). Demystifying the integration of hydroponics cultivation system reinforcing bioeconomy and sustainable agricultural growth. *Scientia Horticulturae*, ***341***: 113973. (NAAS: 9.46)
17. Chatterjee, A., Hazra, S., Sen, P., Gorai, S., Bhattacharya, S., Gupta, V., Singh, G., Singh, G. P., Maji, A., & Ali, M. N. (2024). Physico-biochemical traits and differential expression of genes linked with terminal heat tolerance in bread wheat (*Triticum aestivum* L.). *Cereal Research Communications*, ***52***(2): 841–858. (NAAS: 7.60)
18. Chettri, T., Majumder, J., & Gantait, S. (2024). Callus induction and elicitation for enhanced cyanidin accumulation coupled with antioxidant activities in tropical roses (*Rosa* spp.). *Plant Cell, Tissue and Organ Culture*, ***157***(2): 43. (NAAS: 9.00)
19. Das, T., Mahapatra, S., Bhushan, B.T. et al. (2024). Molecular identification and characterizations of rhizobacterial isolates collected from lentil rhizosphere of Indo-gangetic plains. *Braz journal Microbiology*. (NAAS: 8.2)
20. Datta, S., Saha, P., Deeksha, M. G., Barman, M., Poorvasandhya, R., Panda, M., Ahmed, T., Davis, T. W., Ahmed, B., & Tarafdar, J. (2025). Exploring the physiological, biochemical, and enzymatic responses of *Vigna mungo* varieties to mungbean yellow mosaic india virus (MYMIV) infection. *Scientific Reports*, *15*, 1049. https://doi.org/10.1038/s41598-024-84990-0 (NAAS: 9.80)
21. Debnath, S., Saha, S., Biswas, T., Mal, S., Batabyal, K., Sarkar, D., Yadav, S. L., Bhattacharjee, T., Chakraborty, M., Chattopadhyay, A., & Mandal, B. (2024). Trace elements profiling of hyacinth bean (*Lablab purpureus* var. typicus L.): A rational screening of the breeding lines for biofortification programs. *South African Journal of Botany*, ***167***:40–47. (NAAS: 8.70)
22. Gain, H., Patil, R. N., Malik, K., Das, A., Chakraborty, S., & Banerjee, J. (2024). Image processing and impact analyses of terminal heat stress on yield of lentil. *3 Biotech*, ***14***(8): 188. (NAAS: 8.60)
23. Ghosh, A., Mitran, T., & Mani, P. K. (2024). Estimation of soil nitrogen content influenced by different nitrogen-based management practices within rice-based cropping using diffuse

reflectance spectroscopy and machine learning. *Communications in Soil Science and Plant Analysis*. https://doi.org/10.1080/00103624.2024.2433703 (NAAS: 7.80)

24. Hazra, S., Gorai, S., Roy, S., Bose, S., Hazra, P., Chattopadhyay, A., Ali, M. N., Jambhulkar, S., & Maji, A. (2024). Isolation of yellow vein mosaic virus (YVMV)-resistant mutants of okra (*Abelmoschus esculentus* L.) through applied mutagenesis. *Plant Breeding*, ***143***(2): 232–245. (NAAS: 8.0)
25. Kala, S., Sogan, N., Jawle, C., Bista, S., Hazra, D. K., Roy, K., & Kumar, J. (2024). Valorization of grape pomace-derived bio-pesticide via yeast capsules-nano carriers with entomotoxic potential. *Waste and Biomass Valorization*, 1–19. (NAAS: 8.60)
26. Kiran, P., Prasanta Kumar, P., Subhajit, P., Bishnuprasad, D., Jaison, M., Acharjee, P. U., & Vinayak, R. (2024). Efficacy of yellow gypsum application on mitigating arsenic bioavailability in groundnut and boro-rice grown under arsenic contaminated soil. *Heliyon*, ***10***(5): e26530. (NAAS: 10.00)
27. Koley, T., Majumder, J., Mahanta, M., Chowdhuri, T. K., & Gantait, S. (2024). Characterization and diversity assessment of *Hibiscus* germplasms using morphological, biochemical and molecular markers. *South African Journal of Botany*, ***169C***: 164–177. (NAAS: 9.10)
28. Laha, A., Sengupta, S., Bhattacharyya, S., Bhattacharyya, K., & Guha Roy, S. (2024). Isolation and characterization of rhizobacteria from lentil for arsenic resistance and plant growth promotion. *3 Biotech*, ***14***(1): 30. (NAAS: 8.80)
29. Lepcha, R., Patra, S. K., Poddar, R., Sarkar, A., Ray, R., Alharbi, S. A., Ansari, M. J., & Hossain, A. (2024). Microsprinkler irrigation in combination with nutrient management influences crop and water productivity and water-nutrient dynamics in large cardamom-growing soils in the hilly sub-Himalayan region of India. *Journal of Water and Climate Change*, ***15***(7): 3074–3093. (NAAS: 8.70)
30. Mahapatra, S., Chakraborty, S., Debnath, D., & Roy, C. (2024). Insights into wheat blast: Its epidemiology, recent advances and management strategies. *Journal of Crop Health*, ***76***(2): 397–409. (NAAS: 8.40)
31. Majumder, J., Subrahmanyeswari, T., & Gantait, S. (2024). Natural biosynthesis, pharmacological applications, and sustainable biotechnological production of ornamental plant-derived anthocyanin: beyond colorants and aesthetics. *3 Biotech*, ***14***(7): 175. (NAAS: 8.80)
32. Mal, S., Sarkar, D., Mandal, B., Basak, P., Debnath, S., Chattopadhyay, A., Batabyal, K., & Pramanik, K. (2025). Improving quality of tomato (*Solanum lycopersicum* L.) fruits for fresh consumption and processing with optimised boron application. *Journal of Food Composition and Analysis*, ***140:*** 107255. (NAAS: 10.00)
33. Mandal, U., Patra, S. K., Poddar, R., Sarkar, A., Das, N. C., Al Shuraym, L. A., Sayed, S., Gaber, A., & Hossain, A. (2024). The microsprinkler irrigation system influences the growth, yield and water productivity and nutrient uptake of aerobic rice under humid subtropical climatic condition. *Paddy and Water Environment*. https://doi.org/10.1007/s10333-024-00988-4 (NAAS: 8.20)
34. Manjunath, K. V., Das, S., Mallick, R. G., Hazra, P., Chattopadhyay, A., & Maji, A. (2025). Combining ability and gene action for fruit yield components, quality, shelf life and reaction to tomato leaf curl virus disease. *Heliyon*, ***11***(3):(NAAS: 10.00)
35. Meher, D. D., Das, A., Banerjee, J., Bhattacharya, S., Bagchi, T. B., & Pramnik, K. (2024). Appraisal of genetic variability and detection of sequence polymorphism in the Rc and Rd locus

among the pigmented and non-pigmented genotypes of rice. *Cereal Research Communications*. https://doi.org/10.1007/s42976-023-00482-3 (NAAS: 7.60)

36. Mitra, M., Das, A., Ghorbanpour, M., Malika, S., & Mandal, N. (2024). High frequency shoot regeneration, assessment of genetic fidelity, and histochemical analysis of forskolin production in *Coleus forskohlii* Briq. *Protoplasma*. https://doi.org/10.1007/s00709-024-02004-2 (NAAS: 8.90)
37. Molla, M. A., Mahapatra, S., Chakraborty, S., et al. (2025). Disease risk analysis of spot blotch of wheat under different dates of sowing for Indo-Gangetic plains of India. *Cereal Research Communications*. https://doi.org/10.1007/s42976-024-00621-4 (NAAS: 7.60)
38. Mondal, T., Kumar, R., Bettanayaka, J., Gogoi, R., Koti, P., Ray, M., Kole, R. K., & Mukherjee, S. (2024). Biodegradable Schiff bases: A novel approach for the management of pathogenic fungi (*Sclerotium rolfsii* and *Rhizoctonia bataticola*) and stored grain insect (*Callosobruchus maculatus*) in green gram (*Vigna radiata*). *Environmental Science and Pollution Research*. https://doi.org/10.1007/s11356-024-34713-9 (NAAS: 8.23)
39. Mondal, K., Jana, K., Saha, P., Paramanik, B., Mondal, R., Agrawal, R. K., Das, B., & Kundu, A. (2024). Effect of nitrogen fertilization integrated with bio-product on productivity, profitability, and resource use efficiency of dual-purpose oats–residual green gram system. *Journal of Plant Nutrition*. (NAAS: 8.10)
40. Mondal, M., Biswas, B., Garai, S., Jana, S., Dey, S., Mandal, T. K., Maitra, S., Skalicka, J., Skalicky, M., Gaber, A., & Hossain, A. (2024). Seedbed management, transplanting methods and irrigation regimes influence the growth, productivity and economics of summer rice (*Oryza sativa* L.). *Discover Sustainability*, ***5***(1): https://doi.org/10.1007/s43621-024-00300-8 (NAAS: 8.40)
41. Mondal, M., Nanda, M. K., Peña-Arancibia, J. L., Sarkar, D., Ghosh, A., Goswami, R., Mukherjee, A., Saha, A., Brahmachari, K., Sarkar, S., & Mainuddin, M. (2024). Assessment of inundation extent due to super cyclones Amphan and Yaas using Sentinel-1 SAR imagery in Google Earth Engine. *Theoretical and Applied Climatology*, ***155*:** 5659–5675. (NAAS: 9.40)
42. Mondal, S., Hazra, G. C., & Mani, P. K. (2024). Effect of phosphorus and zinc application on zinc transformation and phyto-availability of zinc fraction in rice soil. *Journal of Plant Nutrition*. https://doi.org/10.1080/01904167.2024.2385584 (NAAS: 8.10)
43. Mondal, U., Patra, S. K., Poddar, R., Sarkar, A., Das, N. C., Al Shuraym, L. A., Sayed, S., Gaber, A., & Hossain, A. (2024). The microsprinkler irrigation system influences the growth, yield, and water productivity and nutrient uptake of aerobic rice under humid subtropical climatic conditions. *Paddy and Water Environment*. https://doi.org/10.1007/s10333-024-00988-4 (NAAS: 8.20)
44. Mukherjee, S., Sarkar, D., Mandal, B., Kanthaal, S., Ghosh, S., Sahu, B., Singh, P., Dey, A., Jaison, M., Dutta, J., & Saha, N. (2024). Conservation agriculture influences soil nitrogen availability in the lower Indo-Gangetic Plains. *Plant and Soil*. https://doi.org/10.1007/s11104-024-06826-0 (NAAS: 9.90)
45. Mukhopadhyay, S., Kundu, K., Nanda, M., & Mondal, S. N. (2025). Spectral insights into symptom development and biochemical changes during the advancement of cucumber downy mildew disease. *Journal of Plant Pathology*. https://doi.org/10.1007/s42161-025-01883-5 (NAAS: 8.20)
46. Nandy, P., Das, S. K., & Tarafdar, J. C. (2024). Impact of foliar spray of zinc in nano form on lentil grown under residual fertility of preceding rice. *International Journal of Plant Production*. https://doi.org/10.1007/s42106-024-00317-z (NAAS: 8.50)

47. Papri, N., Supriya, Y., Datta, J., Bera, S., & Das, S. (2024). Investigating microbial diversity in the endosphere and rhizoplane of three aromatic rice landraces: Implications for biological nitrogen fixation. *Current Microbiology, **81***:454. (NAAS: 8.40)

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Other Publications (Technical bulletin/ Proceedings / Abstracts Popular article/Booklet):

Technical Bulletins

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2. Patra SK, Poddar R, Bandyopadhyay P.K, Ghosh D, Mohanty S, & Sarangi A. (2024). Water resources management in irrigated command: On farm technological solutions for sustainable crop production. 33 p. ISBN: 978-93-340-9979-9.
3. Patra SK, Poddar R, Bandyopadhyay PK, Ghosh D, Mohanty S, & Sarangi A. (2024). Recommendations for water management technology: A three decade of research to improve crop and water productivity in deep tubewell command. 48 p. ISBN: 978-93-340-9451-0.
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Proceedings / Abstracts

1. Choudhury RK, Bhattacharyya K, Balo S, & Mukhopadhyay D. (2024). Slow and controlled release fertilizers: A precise way to minimize nutrient loss from soil through increasing fertilizer use efficiency. Agri-India Today, **4**(6):132–135. https://www.agriindiatoday.in
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3. Choudhury RK, Mukhopadhyay D, Bhattacharyya K. (2025). Nutrient mining in soil ecosystem: Insights, implications and sustainable management strategies. In: *National Conference on Multidisciplinary Approaches for Sustainable Agriculture: Retrospects and Prospects*. College of Agriculture, Uttar Banga Krishi Viswavidyalaya.

4. Choudhury RK, Mukhopadhyay D, Bhattacharyya K, & Balo S. (2024). Smart nutrient delivery system: A precise way of synchronized release and better utilization of nitrogen and inducing lodging resistance in rice (*Oryza sativa* L.). In: *National Seminar on Alternative Fertilizers for Environmental Smart Agriculture*. Indian Society of Soil Science and Indian Agricultural Research Institute. DOI:(http://10.13140/RG.2.2.34863.75686)
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Extension Folders & Other Publications

1. "Unnata Projuktite Pat Chas (2024)" Released on Annual Workshop, 2024 of AINP JAF, CRIJAF, Barrackpore.
2. Ghosh M, Chattopadhyay A, Bhattacharya P.K., & Sandhukhan R. (2024). Intellectual property rights: Activities and Achievements of BCKV, IPR Cell, Directorate of Research, Bidhan Chandra Krishi Viswavidyalaya, Nadia.
3. Jana. H., Saha.P., (2024). **কৃষি সাংবাদিকতা কৃষির গতি শক্তি**. *Bhumiputra*, **22**(18):6.
4. Krishoker aay barate baby corn chash (2024). In: Swanirbhar Krishi: Bhutta fasal kartan, songrokhon o songroho poroborti porichorjya.
5. Mandal B, Mukherjee D, Sarkar S, Raj S.K., Layek U, & Shah M.H. (2024). Agacha niyantrane songrakkhan krishir gurutwa. Extension bulletin on importance of conservation agriculture in weed management.
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7. Mandal, B., Mukherjee, D., Sarkar, S., Hasan, M and Lynk, U. (2024). Weed management in rice- wheat cropping system. Published by, All India Co- ordinated Research Project on Weed Management, Mohanpur, Nadia, W.B.
8. Mandal, B., Mukherjee, D., Sarkar, S., Lynk, U. and Hasan, M. 2024. Conservation agriculture and weed management. Published by, All India Co- ordinated Research Project on Wheat and Barley, Kalyani, Nadia, W.B.

9. Mondal T, & Bauri FK. (2024). **উন্নত প্রথায় পেয়ারা চাষ**.. Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, West Bengal. 15–16 Feb, 2024.
10. Poduval M. (2024). Calendar operation of cashew (English & Bengali).
11. Saha.P. (2024). **নিত্যনতুন উদ্ভিদ রোগ জীবাণুর প্রাদুর্ভাবে আধুনিক কৃষি ব্যবস্থার ভূমিকা**. Bhumiputra, **22**(18):20-26.

Awards, Fellowships, and Recognitions (2024-25)

A. Faculties

- **Prof. Dhiman Mukherjee** actively contributed to capacity building and technology dissemination in cashew-based production systems during 2024–25 by delivering multiple invited and guest lectures on weed management, integrated nutrient management, conservation agriculture, and soil health management in red and lateritic zones of Jhargram district. He was associated with farmers' training programmes under the Tribal Sub Plan of ICAR–Directorate of Cashew Research and participated in Krishi Melas, thereby strengthening farmer–scientist linkages and promoting improved cashew cultivation practices in tribal and resource-constrained regions.
- **Prof. Ivy Chakraborty** received significant academic recognition during 2024–25 by securing the *Best Paper Presenter Award* at the 4th International Conference on Sustainable Development (SDVP-2024) for her work on shelf-stable, low-cost fruit and vegetable products with startup potential. She was further honored with the *Dr. Sreenivasan Award* for her contribution to Food Science and Technology at the 9th International Conference AgriNext: Future Trends in Agriculture.
- **Prof. Jayanta Tarafdar** was conferred with the *A.P.J. Abdul Kalam Outstanding Researcher Award (2024)* and the *Dr. B.B. Mundkur Outstanding Plant Pathologist Award (2025)* in recognition of his sustained contributions to plant pathology research. He served as session chair in national conferences on climate-resilient agriculture and plant-stress interactions, acted as judge for academic merit awards, and held several high-level expert and advisory positions including membership in ICAR-CTCRI Research Advisory Committee, BIRAC panels, DBT project evaluation, Institutional Biosafety Committees, and editorial responsibilities with *Indian Phytopathology (Springer)*, demonstrating national-level scientific leadership.
- **Prof. Kalyan Chakraborti** received multiple prestigious recognitions including the *Dinesh Chandra Sen Special Award (2024)* and the *ILF Excellence Award (2024)* for agricultural journalism. He was also honored with the *Dr. Shyama Prasad Mukherjee Lifetime Achievement Award (2025)*. His invited lectures and memorial addresses on education, self-reliance, and linguistic heritage underscore his interdisciplinary contributions spanning agricultural communication, education, and public intellectual engagement.
- **Dr. Kanu Murmu** served as Rapporteur in the Earth Science discipline during the 7th Regional Science and Technology Congress (2024–25), contributing to scientific deliberations and documentation at the state level and strengthening interdisciplinary dialogue in earth and environmental sciences.

- **Dr. Raghunath Mandal** was officially recognized by the Government of West Bengal for acting as an expert to oversee the operational aspects of the State Bio-control Laboratory under the Joint Director of Agriculture (PP&QC), highlighting his technical expertise and contribution to plant protection quality control systems.
- **Dr. Sunita Mahapatra** was elected as *Fellow of the Indian Phytopathological Society (FPSI-2024)* and *Fellow of the Society for Advancement of Wheat and Barley Research (SAWBAR)*, recognizing her contributions to plant pathology and cereal research.
- **Dr. Sanjit Debnath** delivered a keynote lecture on hydroponics and aquaponics at the Indo-German Science and Technology Centre (IGSTC) Networking Workshop, reflecting his expertise in soilless cultivation systems and climate-resilient agricultural technologies.
- **Prof. S. K. Ray** acted as Co-Chairman of a plenary session during the IPS Eastern Zonal Meet and National Conference at ICAR-NRRI, Hazaribag, and was awarded the *Second Best Oral Presentation* at a national conference on microbiome utilization, highlighting his research excellence and academic leadership in plant–microbe interactions.
- **Dr. A. Roy Barman** secured the *Second Position in Oral Presentation* at the National Conference on Utilization of Microbiome for Sustainable Plant Health and Livelihood, reflecting the quality and relevance of his research work in biochemical and molecular systems related to plant health.
- **Dr. Chaitan Soren** participated in the Scientific Advisory Committee meeting of Kalyan KVK, Purulia, contributing to regional research planning and extension strategy development under the ICAR-KVK system.
- **Prof. G. Mondal** served as External Member of the Board of Studies (BOS) of the Department of Plant Pathology, Visva-Bharati University, Sriniketan.
- **Dr. Pran Krishna Thakur** Dr. Pran Krishna Thakur received the Third Best Poster Award at the ISVS Golden Jubilee National Seminar held at ANDUAT, Ayodhya, recognizing the scientific merit of his research presentation.
- **Dr. Jhuma Datta** obtained Copyright Registration (SW-19612/2024) for her work titled “Detection of dust on green leaves using image processing”, reflecting innovation in applied agricultural technology.
- **Prof. S. C. Kole** acted as an Expert for evaluation of Career Advancement Scheme (CAS) cases of teachers of Palli Siksha Bhavana (PSB), Visva-Bharati University.
- **Dr. Dibyendu Sarkar** was elected as *Fellow of the West Bengal Academy of Science and Technology (2024)* in recognition of his significant contributions to scientific research and academic excellence at the state level.
- **Prof. Somnath Bhattacharya** rendered extensive national- and state-level academic and scientific services by serving as Member of the Project Evaluation Committee (Biological Science and Biotechnology) of WBDST&BT; RAC Member of the National Tea Research Foundation, Kolkata; Council Member (Section X: Agriculture and Forestry) of the West Bengal Academy of Science and Technology; External Expert to the Crop

Improvement Division, ICAR-CRIJAF; and External Expert in faculty recruitment at the Indian Statistical Institute, Kolkata. He also acted as Session Chair in a national symposium on plant biology, delivered invited lectures at ICAR-IIHR, Bengaluru, served on Boards of Research Studies/Academic Councils of RKMVERI and WBSU, and functioned as Editorial Board Member of several reputed international journals.

- **Dr. Sanjoy Kumar Bordolui** contributed to academic planning and capacity building by serving as an Academic Expert for finalization of the model curriculum for short-term courses in the agriculture sector and also acted as a Resource Person in an international conference.
- **Dr. Kingshuk Dhali** served as an Academic Expert for preparation of course curriculum for the Short-Term Training (STT) course titled "Cereals-based Value-added Products Technician," as mandated by the West Bengal State Council of Technical & Vocational Education and Skill Development, contributing to skill-oriented agricultural education and workforce development.
- **Prof. Lalu Das** delivered an invited lead lecture on "How rapidly agricultural crops are vulnerable under global warming and climate change?" at the national seminar on greenhouse gas emission reduction in agriculture held at The Neotia University, Kolkata, on 19 March 2024, and also delivered a keynote lecture on "Climate and Crop Modelling" during the Golden Jubilee Celebration of BCKV Krishi-O-Udyan Mela (15–16 February 2024), highlighting his contributions to climate change research and agrometeorological education.
- **Dr. Nasim Ali** delivered invited lectures, coordinated sessions, and acted as keynote speaker in international conferences.
- **Dr. Sanjib Kumar Das** presented invited and lead papers in national symposia during the reporting period.
- **Prof. Niharendu Saha** delivered a lead lecture on "Zero Waste Life and Management of Bio-hazard Waste" at the Indian Institute of Biomedical Genomics, Kalyani, on 6 December 2024.
- **Prof. Krishna Karmakar** received the Best Poster Award at the International Conference on Biological Control held at Bengaluru during 25–28 February 2025, recognizing the quality and scientific merit of his research contributions in biological pest management.
- **Prof. Md. Hasrat Ali** was nominated as a Member of the Board of Studies (BOS) of the Department of Agricultural Economics, College of Agriculture, Sriniketan, Visva-Bharati University.
- **Prof. Prabir Chakraborti** presented a lead paper in a national symposium and served as an expert member of the Ph.D. selection committee of the Institute of Agricultural Sciences, University of Calcutta.
- **Prof. Subrata Dutta** Dr. Subrata Dutta served as Session Co-Chairman, delivered lead lectures, and was elected Fellow of the Indian Mycological Society.

- **Dr. Partha Choudhuri** acted as Lead Speaker in the session *"Advances in Sustainable Horticulture"* at the National Conference on *"Climate Smart Agriculture: Innovation and Adoption for Sustainability"* held during 20–22 January 2025 at Centurion University, Parlakhemundi Campus, Odisha, contributing to knowledge dissemination on climate-resilient horticultural practices.
- **Prof. Sankar Kumar Acharya** received multiple prestigious recognitions including the *Eminent Scientist Award* from Agriculture and Forestry University, Chitwan, Nepal (2024), the *Dr. M. S. Swaminathan Award* at the International Conference on Agri-Next (2025), and election as *Fellow of the West Bengal Academy of Science and Technology (2024)*. Under his guidance, Best Master's and Best Ph.D. Thesis awards were conferred at international conferences, reflecting excellence in research mentorship and contributions to agricultural economics and climate-change studies.
- **Dr. Asit Kumar Mandal** was nominated as a Member of the Institute Management Committee (IMC) and Research Advisory Committee (RAC) of ICAR-Central Research Institute for Jute and Allied Fibres (CRIJAF), Barrackpore, during 2024, contributing to institutional research planning and governance.
- **Prof. Sagar Mondal** was appointed as Expert Member of the Research Advisory Committee of ICAR-Central Research Institute for Jute and Allied Fibres (CRIJAF), Barrackpore, for a period of three years reflecting recognition of his scientific expertise at the national level.
- **Prof. Saon Banerjee** received the *Best Poster Presentation Award* at the International Conference on Climate Change and Agroecosystems (INAGMET-2024) held at BHU, Varanasi, for her research on photosynthetically active radiation use efficiency in cowpea under different sowing environments.
- **Dr. Tapas Kumar Chowdhuri** secured the *Second Best Oral Presentation Award* at the Tulip Festival and National Symposium on Ornamental Bulbous Flowers held at CSIR-IHBT, Palampur (18–19 February 2025), organized by the Indian Society of Ornamental Horticulture, recognizing the quality of his research contribution.
- **Dr. Sankhajit Roy** acted as External Expert for selection of Research Officer and Young Professional positions at Tocklai Tea Research Institute, Jorhat, Assam, and ICAR-CIFRI, Barrackpore.
- **Dr. Mrinmoy Mondal** served as an External Examiner for conducting viva-voce examinations at Sister Nivedita University.
- **Dr. Soma Biswas** acted as a Member of the Panel of Experts in farmer–scientist interaction programmes during the Golden Jubilee celebrations of BCKV (15–16 February 2024) and also served as Associate Co-ordinator of the RAWE Programme (2024.
- **Dr. Mini Poduval** served as Co-Chairman of the Technical Session-I at the National Conference on Sustainable Cashew Production held at Panjim, Goa (14–15 June 2024), and as Co-Chairman of the Crop Management Session in the Annual Group Meeting of

AICRP on Cashew organized at UHS, Bagalkot and GKVK, Bengaluru (16–18 January 2025), contributing to coordinated research planning in cashew.

- **Dr. Ratneswar Poddar** was conferred the *COBACAS Young Scientist of the Year Award-2024*, recognizing his promising scientific contributions and research excellence.
- **Dr. Pradip Kumar Sahu** served as an expert in Agricultural Statistics for screening, assessment, and selection of ICAR scientists at the Agricultural Scientists Recruitment Board (ASRB), New Delhi, during January and February 2024, contributing to national-level scientific manpower evaluation.
- **Prof. Susanta Kumar De** was nominated as a Member of the Board of Studies (BOS) of the Department of Soil and Water Conservation, School of Agricultural Sciences under Nagaland University.
- **Prof. Manoj Kumar Chourasia** served as a Member of the Board of Studies of the Department of Agricultural Engineering, Visva-Bharati University, Sriniketan.
- **Prof. Himadri Saha** was nominated as a Member of the Advisory Committee and selected as a Research Advisory Committee (RAC) Member of the Darjeeling Tea Research & Development Centre (DTRDC) under the Tea Board, Government of India, Ministry of Commerce & Industry, in September 2024, reflecting recognition of his expertise in tea research and advisory services.
- **Prof. Raghunath Sadhukhan** presented invited and lead papers in national symposia and served as invited or nominated Member of Boards of Studies and academic councils, and also acted as an expert in selection committees, contributing to scientific dissemination, academic governance, and faculty recruitment processes.
- **Dr. Shyamali Das** served as External Examiner of Ramakrishna Mission Vivekananda Educational and Research Institute (RKMVERI), contributing to postgraduate academic evaluation and maintenance of quality standards in higher education.
- **Prof. Mrityunjay Ghosh** was elected as *Fellow of Rice Workers* by ICAR–National Rice Research Institute, Cuttack, Odisha, and served as Convener of the Syllabus Committee (Agriculture/Horticulture) under the Higher Secondary (Vocational) section of the West Bengal State Council of Technical & Vocational Education and Skill Development, contributing to crop science advancement and vocational curriculum development.
- **Prof. Subhra Mukherjee** served as External Expert Member in the 5th Board of Studies meeting of the Department of Agriculture, Brainware University; delivered an invited lecture on nutrient biofortification at a national seminar on nutritional security; acted as Co-Chairperson of a session on innovations in crop genetics and biotechnology at an international conference; and functioned as External Examiner for postgraduate genetics and plant breeding programmes.
- **Dr. Kalyan Jana**, as part of a team of scientists, received recognition from IGFRI and ICAR, New Delhi, for contribution to the development of the forage lathyrus variety "KL-5" under AICRP on Forage Crops and Utilization, and was also conferred the *CV Raman Prize–2023* by the Institute of Researchers, Kerala, and recognizing excellence in forage crop research.

- **Prof. Amit Baran Sharangi** delivered an invited keynote lecture and acted as Session Chair on entrepreneurship through horticulture at an international symposium held at Visva-Bharati, Sriniketan, attended as Guest of Honour at the World Coconut Day celebration organized by the Coconut Development Board, was featured in the World Scientist and University Rankings (2024), and joined as Subject Editor of the international journal *Frontiers in Horticulture*, highlighting his national and international academic recognition and leadership.
- **Prof. Arup Chattopadhyay** received the *Best Oral Paper Award* at a National Seminar held at Narendra Deva University of Agriculture & Technology, Ayodhya, during 2024, recognizing the quality and scientific relevance of his research contributions.
- **Dr. Chandan Karak** received the *Third Best Poster Award* at the ISVS Golden Jubilee National Seminar held at ANDUAT, Ayodhya, served as Session Chair in a national conference on climate-smart agriculture, acted as a nominated expert for seed infrastructure inspection, participated as expert in Krishi Mela interaction programmes, and served as External Paper Setter for undergraduate and postgraduate examinations of TNAU and Visva-Bharati University.
- **Prof. Subrata Karmakar** served as Chairman of the Local Project Advisory Committee (LPAC) constituted by the Science for Equity, Empowerment and Development (SEED) Division of the Department of Science and Technology (DST) for a project at CSIR–Central Mechanical Engineering Research Institute, Durgapur, contributing to national-level project monitoring and scientific advisory functions.
- **Dr. Anita Hansda** served as an invited speaker in a district-level workshop on millets under the National Food Security Mission (NFSM) – Nutri-cereals, held on 02 July 2024.
- **Dr. Arup Dey** secured full sponsorship from IIT Kharagpur to attend the prestigious American Geophysical Union (AGU) Fall Meeting 2024, held during 9–13 December 2024 at Washington, D.C., USA, reflecting international recognition of his research credentials in earth and geosciences.
- **Prof. Subhasis Kundu** served as External Expert Member of the Board of Studies of the Department of Horticulture and Post-Harvest Technology, Visva-Bharati University, and acted as Invited Speaker at Visva-Bharati and OUAT, Chiplima, delivering lectures on strategies for improving fruit yield and quality, thereby contributing to horticultural education and capacity building.
- **Dr. Anupa Biswas** participated in training, BOS and SAC meetings, organized student exposure visits, and delivered lectures under technology development programmes, strengthening extension and academic activities.
- **Prof. Pranab Hazra** was conferred the *Lifetime Achievement Award* by the Academy for Advancement of Agricultural Sciences in recognition of his outstanding contributions to horticultural science. He also served as a Member of the Quinquennial Review Team (QRT) for ICAR–IIVR, Varanasi and AICRP on Vegetable Crops, and functioned as Executive Councillor of the Indian Society of Vegetable Science (2021–2024), reflecting national-level academic leadership.

- **Prof. Anurup Majumder** was awarded *Fellow of the Society (AAAS)* in 2024 at Agartala, recognizing his contributions and professional standing in agricultural sciences.
- **Dr. Sushanta Saha** received the *Young Scientist of the Year Award–2024* from the Cooch Behar Association for Cultivation of Agricultural Sciences (COBACAS), UBKV, Pundibari, in recognition of his promising research contributions.
- **Dr. Gouranga Sundar Mandal** served as Paper Setter and External Examiner at Bihar Agricultural University, Sabour, Bhagalpur, contributing to academic evaluation and quality assurance in agricultural education.
- **Dr. Amitava Banerjee** received the prestigious *Dr. H. S. Pruthi Award* (2025) for commendable contributions in entomology and secured the *Best Oral Presentation Award (First Position)* at the International Conference on Agri-Next. He served as Councillor (Zone III) of ISPRD, ICAR-IIPR, Kanpur; External Expert (Entomology) at The Neotia University; held additional responsibilities as Assistant Director of Extension Education and DDO at BCKV; and acted as Rapporteur in national and regional scientific congresses, reflecting leadership in research, extension, and academic governance.
- **Dr. Md. Hedayetullah** received the *Eminent Scientist Award* and *Best Oral Presentation Award* at the International Conference ICANFTA-2025 jointly organized by Brainware University and ISAHRD, Chandigarh.
- **Prof. Manoj Kumar Nanda** was nominated for an ACIAR-sponsored Short-Term Research Programme at CSIRO, Canberra (November 2024), highlighting national and international professional recognition.
- **Prof. F. K. Bauri** served as External Expert Member of the Board of Studies of the College of Horticulture and Forestry, Central Agricultural University (CAU), Pasighat, Arunachal Pradesh, contributing to curriculum development and academic governance.
- **Prof. Benukar Biswas** acted as Session Judge at the 31st West Bengal State Science and Technology Congress (2024), delivered a lead lecture, served as Co-Chairman of technical sessions in a national conference organized by COBACAS, UBKV, and functioned as Editorial Board Member of *Scientific Reports* (Springer Nature), reflecting national recognition and editorial leadership.
- **Prof. Manabendra Ray** served as Lead Speaker in a seminar on Indigenous Knowledge on Science and Technology (IKST) held on 22 March 2025 at Rishra, West Bengal, contributing to the dissemination and integration of indigenous scientific knowledge systems.
- **Prof. Ajoy Kumar Mukhopadhyay** was appointed as Dean, Post Graduate Studies, Bidhan Chandra Krishi Viswavidyalaya, with effect from 17 December 2024, in recognition of his academic seniority, professional merit, and leadership in postgraduate education.
- **Prof. Mahadev Pramanick** served as Expert Member of the Selection Committee for Assistant Professor (Agronomy) at JIS College, Kalyani, and was nominated as Member of the Board of Studies of the Department of Agronomy, Swami Vivekananda University, Barrackpore, contributing to faculty selection and curriculum governance.

- **Prof. Umesh Thapa** delivered invited lectures on hydroponic and soilless farming at national platforms, acted as expert and chairperson in international conferences, served as external member and examiner for Ph.D. committees, was nominated as Adjunct Faculty at OUAT, Bhubaneswar, and received approval of a design patent titled "Automated Hydroponic Device with Nutrient Management" from the Government of India.
- **Prof. Gautam Saha** delivered invited lectures, served as Guest of Honour and Session Chairman in scientific events, and acted as Expert Member in selection committees, reflecting sustained contributions to academic leadership, mentoring, and research dissemination.
- **Prof. Tapas Biswas** served as Academic Expert for finalization of model curriculum for Short Term Training (STT) courses in the agriculture sector for the West Bengal State Council of Technical & Vocational Education and Skill Development.
- **Dr. Jayoti Majumder Sarkar** served as Member of the Executive Committee of the Society for Promotion of Horticulture, ICAR–Indian Institute of Horticultural Research, Bengaluru, and was conferred the *Senior Scientist of the Year Award* by the Cooch Behar Association of Cultivation of Agricultural Sciences at a national conference.
- **Dr. Sibajee Banerjee** was invited to deliver a lecture on millets at IISER Kolkata on 16 January 2024, contributing to scientific outreach and awareness on nutri-cereal research.
- **Prof. Aniruddha Pramanik** served as paper setter for PG and Ph.D. examinations of JNKVV, Jabalpur, acted as external examiner for Ph.D. thesis evaluation at UBKV.
- **Dr. S. Debnath** was awarded the *Best Oral Presentation (First Rank)* at the 9th International Conference on "AgriNext: Future Trends in Agriculture.
- **Prof. Amitava Biswas** served as expert member in CAS selection committees at OUAT, received the Best Programme Coordinator Award of the Red Ribbon Club (NSS) from the Government of West Bengal, and was nominated as Member of the Board of Studies of the Department of Lifelong Learning and Extension, University of Kalyani..
- **Prof. Narayan Chattopadhyay** Mr. Narayan Chattopadhyay acted as judge for flower, vegetable and PSMA crop shows organized by the District Horticulture Office, Barasat, Government of West Bengal.
- **Prof. P. K. Bhattacharyya** functioned as Notified Breeder of BCKV for breeder seed production of major crops, served as RAC Member of CSR&TI, Berhampore, and delivered invited lectures at international conferences and KVK platforms.
- **Prof. D. K. Misra** served as Session Chairman in a national seminar held at ICAR–CRURRS, Hazaribag, Jharkhand, contributing to scientific deliberations and academic leadership.

B.Students

- **Mr. Arkadeep Sarkar** received the Best Oral Presentation Award at the 7th Regional Science & Technology Congress organized by the Department of Science and Technology & Biotechnology, Government of West Bengal, and the Best Poster Presentation Award at the national conference on "Emerging Issues and Sustainable

Strategies in Plant Health Management: A Global Perspective" organized by the Indian Phytopathological Society and ICAR–CCRI, Nagpur.

- **Dr. Amrita Dasgupta** was conferred the MJ Narasimhan Academic Merit Award-2024 by the Indian Phytopathological Society, IARI, New Delhi.
- **Mr. Rohan Das** received the Best Oral Presentation Award at the IPS (Eastern Zone) Meet-cum-National Conference, Jharkhand, 2024.
- **Dr. Moumita Panda** received the Best Oral Presentation Award at the IPS (Eastern Zone) Meet-cum-National Conference, Jharkhand, and the Best Oral Presentation Award at the IPS–NAAS National Conference, Tripura.
- **Mr. Souvik Chhandogi** was awarded the Best Poster Presentation Award at the IPS Eastern Zonal Conference, Jharkhand.
- **Mr. Soumyayan Roy** received a Travel Grant from the World Vegetable Center to participate in the International Mungbean Congress-2024 held at Bangkok, Thailand (5–7 March 2024).
- **Ms. Ipsita Ghosh** received the Innovative Article Award-2024 for her article "Kleptoparasitism: A Peculiar Behaviour observed in Insects."
- **Mr. Sabyasachi Ray** received the Best Oral Presentation Award at the IPS Eastern Zonal Meet & National Conference held at ICAR-NRRI, Hazaribag, Jharkhand.
- **Ms. Neha Mahato** received the Best Oral Presentation Award at the Entomology Students' Conclave held at Assam Agricultural University, Jorhat, Assam.

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

a. Seminar/Symposium/Conference attended: 51

b. Workshop/Group meeting attended: 45

c. Summer-Winter School/Training attended: 28

Organized:

1. Dr. Mrityunjay Ghosh organized an Intellectual Property Rights Workshop and Faculty Development Programme on 18.01.2024 at BCKV, Nadia
2. Dr. Mrityunjay Ghosh organized a Special Programme on ‘Geographical Indication of Aromatic Rice of West Bengal’ on 16.02.2024 at BCKV, Nadia
3. Prof. Lalu Das act as a coordinator and organizer for the Golden Jubilee Celebration of BCKV “Krishi-O-Udyan Mela-2024” during 15-16th February, 2024 at Bidhan Chandra Krishi Viswavidyalaya, Mohanpur
4. Dr Kushal Roy organized 7th Regional Science and Technology Congress conjointly with the Department of Science and Technology and Biotechnology, Government of West Bengal at BCKV on 14th and 15th January 2025 as a Nodal Officer and Joint Organising Secretary of the host institute.
5. Dr. Kalyan Chakraborti organised District level Seminar on Cashewnut held at BCKV, RRS, Jhargram on 18th March, 2025
6. Dr. Kalyan Chakraborti organised State Level Seminar on 'Indigenous Knowledge on Science and Technology' to be held at Prem Mandir Ashram, Rishra, Hooghly on 22 March, 2025.
7. Dr Subhas Chandra Kole organized two months Internship training on ‘Production Techniques of Biofertilizers’ from 09.02.2024 – 08.04.2024.
8. Dr Subhas Chandra Kole, Head of the department Agriculture Chemistry and Soil Science, organized Invited Faculty Lecture on “Information -driven Sustainable Soil Management” by Prof. Asim Biswas, University of Guelph, Canada on 15.03.2024 at D. R. Sarkar Hall, Faculty of Agriculture, Mohanpur.
9. Dr Sagar Mondal organized Two (2) Guest Lecture jointly by the department of Agril. Extension & Agril. Economics.Dr. Md. Hedayetullah organized Two workshop on Chickpea cultivation under rice fallow condition in West Bengal

Contact Details of the Faculty

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13. Department of Seed Science and Technology

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Details of Financial Progress of Development Grant

Budget of Bidhan Chandra Krishi Viswavidyalaya for 2024-25

Sl. No.	Source A. Head	(Rs. In Lac.) Actual Receipt 2024-25
1	Main Campus (including Bardhaman and Bankura College)	1293856790.00
	Total (Non Plan)	**1293856790.00**
1	AICRP 25% of State Share	34763959.00
2	State Ad-hoc Project	215899.00
3	RIDF Projects	0.00
4	RKVY	33799499.00
5	Training Programme	0.00
	Total (Plan)	68779357.00
	Total A (Non Plan + Plan)	**1362636147.00**
	B.	
1	College of Agriculture at Bankura	33000000.00
	Total (B)	**33000000.00**
	C.	
1	ICAR 75% share of AICRPs and AINPs	104334451.00
2	Development & Strenthing of DEE	600000.00
3	ICAR Ad-hoc Projects 100%	7815466.00
4	ICAR AICRP 100%	12115378.00
5	Development Grant (ICAR) (RAWE, NTS, Scholarship)	8569270.00
6	KVKs (Howrah, Hoogly, Nadia) 100%	84841255.00
7	Mega Seed Project (Including Revolving Fund)	8841631.00
	Total (C)	**227117451.00**
	D.	
1	Grants received from the Govt. of India on Comprehensive scheme 100%Plan	35150000.00
2	Grants received from Govt. of India on Agromet Advisory Service 100% Plan	3070991.00
3	Grants Received from the Govt. of India on Ad-hoc Schemes 100%	8393556.00
4	RNARC	0.00
	Total (D)	**46614547.00**
	E.	
1	Private/Corporate Projects	37228332.00
2	Seminer, Workshop and Training	1988570.00
	Total (E)	**39216902.00**
	F.	
1	Internal Resource Generation	75513536.00
	Total (F)	**75513536.00**
	Total (A+B+C+D+E+F)	**1784098583.00**

Sl. No.	Name of Units	(Rs. In Lac) Actual Expenditure for 2024-25
A.	**Non Plan (Govt. of West Bengal)**	
	Grant-in Aids (Mohanpur, Burdwan and Bankura)other than Retirement benefits	1293363715.00
	Retirement Benefits	
	TOTAL :- A	**1293363715.00**
B.	**Plan (Govt. of W.B)**	
1	All India Co-ordinated Research Project (25%)	34763959.00
2	College of Agriculture at Bardhaman	0.00
3	College of Agriculture at Bankura	33000000.00
4	State Ad-hoc Schemes (100%)	700000.00
5	RIDF Projects	
6	RKVY	39142649.00
7	Training Programme	0.00
	TOTAL :- B	**107606608.00**
	Non-plan and Plan (Govt. of W.B.):	
C.	**Plan (I.C.A.R. Projects)**	
1	All India Co-ordinated Research Project (75%)	101311753.00
2	KVK, Nadia, Hooghly, Howrah (100%), Purba Medinipur ICAR	99553441.00
3	Development & Strenthing of DEE	1075706.00
4	ICAR Ad-hoc Schemes	9651304.00
5	ICAR AICRP 100%	13962906.00
6	Development Grant (RAWE, NTS, Scholarship)	7946962.00
7	Mega Seed Project	5214029.00
	TOTAL :- C	**238716101.00**
D.	**Govt. of India Plan**	
1	Comprehensive Scheme (100%), Govt. of India	29093246.00
2	Agromet Advisory Serv. (100%), Govt. of India	2842991.00
3	Govt. of India Ad-hoc Schemes (100%)	10305472.00
4	RNARC Projects	1000047.00
	TOTAL:-D	**43241756.00**
E.		
1	Private/Corporate Projects	46322919.00
2	Seminer, Workshop & Training	4376971.00
3	Internal Resource	75513536.00
	TOTAL :-E	**126213426.00**
	GRAND TOTAL (A+B+C+D+E)	**1809141606.00**

Report of Nodal Cell

BCKV Annual Progress Report of Strengthening and Development Grant to Agricultural Universities

1. Financial Year of Report**: 2024-25**
2. Name of the Vice Chancellor along with his Date of Joining**: Dr. Ashok Kumar Patra, 19th December,2024**
3. Whether Present Vice Chancellor is Permanent or Acting**: Permanent**
4. Year of Establishment of the university**: 1974**
5. 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**
6. Brief Introduction along with Mandate and Objective of the University**:**

No. of Constituent Colleges: 5 **8. No. of Affiliated Colleges: Nil**

9. Details of all Constituent College:

Sl No.	Name of Constituent College	Year of Establishment	Location of along with		Designation of Head of Colleges (Dean/Associate Dean/ Directors)	Telephone No.	Official Email of College
			Place	District			
1.	Faculty of Agriculture	1974	Mohanpur	Nadia	Dean	033-2587-8338	deanofag.bckv@gmail.com
2.	Faculty of Horticulture	1996	Mohanpur	Nadia	Dean	9477473506	deanhorti@bckv.edu.in
3.	Faculty of Agricultural Engineering	1996	Mohanpur	Nadia	Dean	8902348196	dean.ae@bckv.edu.in
4.	College of Agriculture	2014	Burdwan	Burdwan	Teacher-in-Charge	9903126538	das.sibsankar123@gmail.com
5.	College of Agriculture	2015	Chatna	Bankura	Associate Dean	9433438870	de.susanta.kr@bckv.edu.in

10. 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

				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
						Plant Physiology	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 Engg.	4	Food Engineering	6
4	College of Agriculture, Bardhamaan	B.Sc. (Hons.) Agriculture	8 Semester	Don't have PG curriculum		Don't have PG curriculum	
5	College of Agriculture,Susunia	B.Sc. (Hons.) Agriculture	8 Semester	Don't have PG curriculum		Don't have PG curriculum	

11. Student Status in University/ all Constituent Colleges/Faculty:

Sl No.	Name of College	Parameters	Numbers				
			Bachelor's	Master's	Ph.D.	Others including Diploma	Total
1.	Faculty of Agriculture	Intake (1st Yr)	154	147	89	No other Degrees are conferred	390
		Enrolled (1st Yr)	151	133	67		351
		Passed Out	**110**	**90**	**62**		**262**
2.	Faculty of Horticulture	Intake (1st Yr)	38	33	26		97
		Enrolled (1st Yr)	33	26	16		75
		Passed Out	**30**	**28**	**19**		**77**
3.	Faculty of Agricultural Engineering	Intake (1st Yr)	32	12	10		54
		Enrolled (1st Yr)	39	3	8		50
		Passed Out	**20**	**6**	**1**		**27**
4.	College of Agriculture, Burdwan Campus	Intake (1st Yr)	32	**No Master's and PhD Degree**			32
		Enrolled (1st Yr)	31				31
		Passed Out	**28**				**28**
5.	College of Agriculture, Bankura Campus	Intake (1st Yr)	32				32
		Enrolled (1st Yr)	30				30
		Passed Out	**25**				**25**

12. Category wise total number of students in the university during the reported period (including off campus colleges of the Universities)

Degree	Faculty / College	No. of students					
		SC	ST	OBC	General	Others	Total
Bachelor's	Faculty of Agriculture	121	31	94	303	24	**573**
	Faculty of Horticulture	30	7	21	74	3	**135**
	Faculty of Agril. Engineering	34	7	22	67	3	**133**
	College of Agriculture, Burdwan	27	7	20	67	4	**125**
	College of Agriculture, Chatna	26	8	19	66	4	**123**
Master's	Faculty of Agriculture	51	18	39	155	6	**269**
	Faculty of Horticulture	10	4	10	31	0	**55**
	Faculty of Agril. Engineering	3	1	3	8	0	**15**
Ph. D.	Faculty of Agriculture	21	12	17	49	108	**207**
	Faculty of Horticulture	3	2	2	18	31	**56**
	Faculty of Agril. Engineering	1	0	1	4	14	**20**
Total		**327**	**97**	**248**	**842**	**197**	**1711**

13. Gender Pattern amongst Students Enrolled in University/ Constituent College/Faculty:

Sl No.	Name of College	Parameters	Numbers (including 1st, 2nd, 3rd, 4th year as applicable)			
			Bachelor's	Master's	Ph. D.	Total
1	Faculty of Agriculture	Male	335	161	127	623
		Female	238	108	80	426
		Total	**573**	**269**	**207**	**1049**
2	Faculty of Horticulture	Male	75	28	30	133
		Female	60	27	26	113
		Total	**135**	**55**	**56**	**246**
3	Faculty of Agricultural Engineering	Male	92	12	16	120
		Female	41	3	4	48
		Total	**133**	**15**	**20**	**168**
4	College of Agriculture, Bardhamaan	Male	80	These two colleges don't have any Masters and Doctoral degree programme.		80
		Female	45			45
		Total	**125**			**125**
5	College of Agriculture, Chatna,	Male	80			80
		Female	43			43
		Total	**123**			**123**

14. Present Faculty Strength in the University/ College/ Faculty:

Sl No.	Name of the University/ College/ Faculty	No. of Total Sanctioned				In Position (No. of Faculty based on present Designation after implementation of Re-designation cum CAS scheme)			
		Prof.	Assoc. Prof.	Asst. Prof.	Total	Prof.	Assoc. Prof.	Asst. Prof.	Total
1	Faculty of Agriculture	19	47	109	175	77	6	59	142
2	Faculty of Horticulture	6	14	22	42	27	1	5	33
3	Faculty of Agril. Engineering	5	5	12	22	5	5	1	11
4	College of Agriculture, Bankura	11	0	11	22	0	0	9	10
5	College of Agriculture, Burdwan	11	0	11	22	1	0	9	9
Total		**52**	**66**	**165**	**283**	**110**	**12**	**83**	**205**

15. 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	-	-

Budgetary Support to the University: **(Rs. In lakh)**

Budget Heads	Total Funding form State Government			Funding support from ICAR (Rs. lakh)					Any other central funding**	Grand Total
				Education Division	AICRP	KVK	Any other ICAR support*	Total 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	12779.05	12779.05	-	856.56	738.35	-	1594.91	-	14373.96
Capital	0	371.90	371.90	-	8.10	34.71	-	42.81	-	414.71
Revenue	0	478.65	478.65	85.69	170.15	105.40	201.25	562.49	447.58	1041.14
Total	0	13629.60	**13629.60**	85.69	1034.48	878.46	201.25	**2199.88**	**447.58**	**15829.48**

*** including Network Project, Extra Mural, etc** ****including DST, DBT, ICMR, RKVY**

16. **Total amount of Revenue Generation from all Sources by Agriculture University including off campus colleges (give in tabular form):**

Student's Collection	-	456.88 Lakh
Sale Proceed of farms	-	65.02 Lakh
Misc. earnings	-	123.60 Lakh
	Total Amount	**645.50 Lakh**

17. **All New/Existing Civil Works Repair & Renovation under taken out of the Development Grant (Details of each civil work must be reflected in the table as per approved allocation during period under report) :** No Fund Sanction during the year

18. **Details of Sports Facilities Strengthened by ICAR:** No Fund Sanction during the year

19. **Total number of smart class rooms developed (Till date) :** No Fund Sanction during the year

20. **All Equipment purchased/replaced under Development Grants (Details of each equipment must be reflected in the table as per approved allocation during period under report):** No Fund Sanction during the year

21. **All Information Technology equipments including all Hardware/ Software (Computers/ Laptops/ Printers/ Scanners/ UPS/ Software etc) purchased/replaced out of the Development Grants:** No Fund Sanction during the year

22. **All Furniture & Fixtures purchase out of Development Grant related to Hostel, Laboratory, Exam Hall and Class Rooms:** No Fund Sanction during the year

23. **Status, where Internet and Wi-Fi Connectivity not provided in the University/ Constituent College / Faculty/ Hostels:**

Sl. No.	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, Bankura	Yes	Yes	

24. **Number of Student Beneficiaries availing RAWE/In Plant Training/Internship under Student READY in the University:**

(Rs. In lakh)

Sl. No.	Name of the University/ College/ Faculty	No of Students of Beneficiaries along with Stipend given						Total	
		RAWE		In-plant training		Internship			
		No.	Stipend	No.	Stipend	No.	Stipend	No.	Stipend
1	Faculty of Agriculture	108	19.44	-	-	-	-	108	19.44
2	Faculty of Horticulture,	28	5.04	-	-	-	-	28	5.04
3	Faculty of Agricultural Engineering,	-	-	29	0.87	25	3.75	54	4.62
Total		**136**	**24.48**	**29**	**0.87**	**25**	**3.75**	**190**	**29.10**

RAWE – Rural Agricultural Work Experience

25. 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. A.Pramanik 9433376115 pramanik.aniruddha@bckv.edu.in	60.00 (25.00 +35.00)	2024-25 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)	2024-25=30	High value vegetables, flowers and quality planting materials	Rs. 0.174 lakh	Rs. 0.062 lakh	100% share distribution on profit
2018-19 (New)	Faculty of Horticulture, BCKV, Mohanpur, Nadia, West Bengal	Processing of Fruits and Vegetables for value addition (Fruit Beverage Unit)	ICAR	Prof. Surajit Mitra 9433513560 drsurajitmitra@yahoo.co.in	80.00	2024-25=30	Different fruit beverages in commercial scale	Rs. 0.496Lakh	Rs.0.344 lakh (materials of Rs.2.5lakh in stock in hand)	50% share distribution on 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	2024-25=5	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	2024-25=5	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	2024-25=5	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	2024-25=5	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**	**115**		**0.669**	**0.406**	**50%**

26. Achievements under Niche Area of Excellence (If any): No Fund Sanction during the year

27. Number of Students Selected for JRF/SRF/NET (ICAR/ICMR/UGC/CSIR/DBT)/ARS:

Sl. No.	Name of College/ Faculty	JRF	SRF	NET	ARS	Others	Remarks
1	Faculty of Agriculture	13	1	46	0	1	-
2	Faculty of Horticulture,	4	2	15	0	1	-
3	Faculty of Agricultural Engineering,	0	0	1	0	0	-
4.	College of Agriculture, Burdwan	2	0	0	0	0	-
5.	College of Agriculture, Bankura	3	0	0	0	0	-
	Total	**22**	**3**	**62**	**0**	**2**	-

28. Academic Achievement (No. of M.Sc. thesis submitted during the year):

Sl. No.	Name of College/Faculty	No. of M.Sc. Thesis Awarded in the reported year only	No. of Research Publication with NAAS /Thomson & Reuters rating			Remarks
			<5	5.0-7.5	> 7.5	
1	Faculty of Agriculture	90				
2	Faculty of Horticulture,	28				
3	Faculty of Agricultural Engineering,	6				
	Total	124				

29. Academic Achievement (No. of Ph.D. Thesis submitted during the year):

Sl. No.	Name of College/Faculty	No. of Ph. D. Thesis Awarded in the reported year only	No. of Research Publication with NAAS /Thomson & Reuters rating			Remarks
			< 5	5.0-7.5	> 7.5	
1	Faculty of Agriculture	62	21	25	16	Good number of papers published in 2024-25 are from the Ph.D. thesis's awarded earlier.
2	Faculty of Horticulture	19	10	7	2	
3	Faculty of Agricultural Engineering,	1	0	1	0	
Total		**82**	31	33	18	

30. Curriculum Development & Delivery:

Sl. No.	Name of the University/ College/ Faculty	Title of Practical/ Instructional Manuals developed	Available offline or online, if yes then web address
1	Faculty of Agriculture	Technical Bulletin on 'Intellectual Property Rights: Activities and Achievements of BCKV'	

31. Details of the assistance provided under Library Strengthening Component: No fund sanction during the year

32. Details of study tour conducted (ICAR assistance): No fund sanctioned during the year

33. Details of Agencies/ Organisation where students got Placement during the year:

Sl. No.	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	0	7	4	7	1	22
2.	Faculty of Horticulture	Mohanpur, Nadia	0	1	1	2	0	7
3.	Faculty of Agricultural Engineering,	Mohanpur, Nadia	0	0	2	2	0	5
Total			**0**	**5**	**5**	**11**	**1**	**34**

34. Number of Faculty attending seminars/symposia (ICAR funds)/capacity building programme: NA (No fund received)

Sl. No.	Name of the University/ College/ Faculty	Location & District	Professor	Associate Professor	Assistant Professor
1	Faculty of Agriculture	Mohanpur, Nadia			
2	Faculty of Horticulture	Mohanpur, Nadia			
3	Faculty of Agricultural Engineering,	Mohanpur, Nadia			

35. Linkages with ICAR Institutes for Academic Research student exchange:

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.	√	√	

36. No. of student entrepreneurs over last 5 years (year wise): One

37. Total no. of entrepreneurs over last 5 years: One

38. Good Governance

Item	Number	Dates
Meeting of the executive council held	261st, 262nd	22/11/2024, 13/12/2024
Meeting of Faculty Council Faculty of Agriculture	140th ,141st	17/05/2024, 09/12/2024
Meeting of Faculty Council Faculty of Horticulture	61st ,62nd	17/05/2024, 09/12/2024
Meeting of FC of Faculty of Agril. Engineering	48th Emergent meeting ,49th	17/05/2024, 09/12/2024

39. Linkages with National/International universities/Institutes:

40. Affiliated private/govt colleges with the University: No affiliated College

41. Details of Faculty in Affiliated College: No affiliated College

42. Student Status in Affiliated College: No affiliated College

43. Gender Pattern amongst Students Enrolled in Affiliated College: No affiliated College

44. Please mention Ten Most Significant Achievements/Impacts out of the ICAR Development Grant Provided to the University: No fund sanctioned during the year

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

1. In spite being accredited up to June 2026, three major UG programmes in Agriculture, Horticulture and Agril. Engineering along with BCKV (as 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.
2. Due to gradually increasing proportion of girl students in every UG/PG/PhD batch, there has been an acute shortage of Girls' Hostel to accommodates our girl students of UG, PG and PhD programmes comfortably. Because of this crisis, 3-4 girl students are accommodated in one room. Such arrangement often creates conflicts and compromise performance of the students.

46. Justification for Continuing ICAR Support:

BCKV did not receive any fund under ICAR Development Grant and other educational grants since the year 2021-22, though, lately it has been accredited up to June 2026. Therefore, conduction of regular academic activities is being affected to a great extent. Hence, continuing ICAR Support during 2025-26 onwards is of extremely important to us because of the following:

1. Construction of new Girls' Hostel
2. Procurement of minor equipment for conduction of UG/PG/PhD Practical classes.
3. Procurement of modern instruments to support modified PG & PhD courses as per BSMA of ICAR
4. Procurement of instruments/facilities to support modified UG courses as per VI Deans Committee recommendation.
5. Development of new ELP Units and upgradation of existing ELP Units for UG students
6. Procurement of new and maintenance of existing ICT infrastructure.
7. Development of Incubation Centre for mentoring interested student-entrepreneur
8. Procurement of Books (Hard and Soft copies) for the Central Library.
9. Financial support to Faculty members for participation in seminar/symposia/workshop
10. Day-to-day activities of ICAR Nodal Cell, which has to comply various documentation processes prescribed by ICAR throughout the year

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

1. Construction of new Girls Hostel and renovation of existing Boys and Girls Hostels. Existing hostels are very old and not repaired since long time which need immediate and massive renovation. Due to increase in the proportion of girl student in every UG/PG/PhD batch, construction of new Girl's hostel is immediately needed.
2. University has already implemented Restructured and Revised Syllabi of ICAR for PG and PhD course as recommended by BSMA Committee from 2022-23 and revised UG syllabi recommended by VI Deans Committee from 2024-25. 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.
3. 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.
4. BCKV did not receive any grant from ICAR since 2020-21 and so laboratory and farm activities of UG students are being affected to a great extent. Massive allotment of fund is required for updating these facilities.

5. BCKV has only four smart classrooms. However, to conduct UG courses using modern tools, particularly in the context of proposed VI Deans Committee Report, six more UG classrooms are needed to be upgraded to smart class room for which financial support from ICAR is urgently required.

48. **UC/AUC as per format:** Not applicable. (No fund received from ICAR during 2024-25)
49. **Whether the university is accredited or not (mention date):** Bidhan Chandra Krishi Viswavidyalaya is accredited up to 27/06/2026
50. **National Ranking overall and among AUs.:** Bidhan Chandra Krishi Viswavidyalaya Ranked 13 (NIRF) in Agriculture and Allied Sector Category.
51. **Please attach good quality photographs (for each component wherever, applicable):** No component-wise fund received from ICAR during 2024-25
52. **a) For any new civil work imitated with the grant from Council please indicate if any liability is still pending w.r.t to the approved vetted amount:** Not Applicable

    (b) Allocation for the Financial Year 2024-25: Not applicable (No fund received during 2024-25)
53. **Provide Five Best Quality Photographs of the Activities Depicting Impact Mentioned in the Report:**

Seventh Regional Science & Technology Congress at BCKV

State Level Seminar on Spices, Medicinal and Aromatic Plants at BCKV

Farm Business and Tourism Meet at BCKV

BCKV received GI tag for Aromatic Rice

Felicitation of students for securing admission in national/international premier institutes

14.8.25

Signature of the Nodal Officer
Name: Prof. Abhijit Saha
Designation: ICAR Nodal Officer
Date: 14.8.2025

Nodal Officer(ICAR Nodal Cell)
B.C.K.V. Mohanpur, Nadia,
West Bengal, 741252

18/8/25

Signature of the Vice Chancellor
Name: Dr. Ashok Kumar Patra
Designation: Vice-Chancellor
Date:14.8.2025

Vice-Chancellor
Bidhan Chandra Krishi Viswavidyalaya
Mohanpur-741252, Nadia, West Bengal