ANNUAL REPORT
2020-21

Bidhan Chandra Krishi Viswavidyalaya
Mohanpur, Dist. Nadia, West Bengal, India, PIN-741252

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 provide appropriate technical and consultative support to the state government towards its implementation of agricultural development programme.

MISSION

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

GOALS

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

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Bidhan Chandra Krishi Viswavidyalaya,
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Prof. B S Mahapatra
Vice-Chancellor

No. VC/BCKV/ 1141 849
Date : 03.03.2022

PREFACE

I am extremely pleased to note that Bidhan Chandra Krishi Viswavidyalay has published its Annual Report, 2020-21. Bidhan Chandra Krishi Viswavidyalay has maintained a trajectory of steady and sustained growth since its inception in 1974. Growth of the University has been stupendous in terms of its infrastructure, departments, new courses and programmes, affiliated colleges regional research stations and sub-stations and Krishi Vignyan Kendras.

The Annual Report of the University portrays the wide spectrum of various academic, research and co-curricular activities at the University and its affiliated colleges. The Editorial Committee for Annual Report has candidly tried to capture the vibrant academic environment that exists in the University Campus highlighting different academic activities, research achievements, research publications, participation in international seminars and workshops, special achievements including awards and honours. I consider that this document will serve as a showcase of the University activities.

This year dawned with the nation-wide lock down due to COVID pandemic which also brought with it the abrupt need for on-line education. Our University took on this challenge and did commendable work on on-line education. In the academic front students' achievement from the main campus at Mohanpur and extended campuses at Bankura and Burdwan is excellent, so is in sports and cultural front. Forty three students have qualified ICAR AIEE PG, 10 in ICAR Senior Research Fellowship (SRF) and 76 students cleared NET in this year. Forty seven students have been selected in the Post of 'Assistant Director of Horticulture , Department of Horticulture, Government of West Bengal.

I feel satisfied to see the development of a number of varieties in different crops like, coconut, cashew nut, chili, brinjal, okra and lentil which were notified by CVRC, Govt. of India. The scientists of the Viswavidyalaya have published more than 278 research papers in peer reviewed journals. Apart from that 33 book chapters and 28 books were published by the faculty staff. 78 scientists actively participated in various webinar both at National and International level.

However, in order to sustain food production, we have to develop new ideas with maximum use of natural resources, including soil, fertilizer, water, land, radiation, etc. The foremost idea is to enhance the cropping intensity, which has not been possible due to resource constraints, especially water for irrigation in some parts of the State, especially for districts like, Bankura, Purulia, West Medinipur and West Burdwan.

I appreciate the efforts of the Chairman and all the members of the Annual Report committee and all the contributors for bringing out the Annual Report 2020-21. I express my sincere gratitude to the Department of Agriculture, Govt. of West Bengal and Indian Council of Agricultural Research, Govt. of India for providing financial and technical support for the University.

(B. S. Mahapatra)

Contents

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 four 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. Recently 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 46 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 and scholarship. 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 goal of the state through increasing agricultural and agro-based industrial growth in a sustainable manner under changing climatic scenario.

FACULTY OF AGRICULTURE

The Faculty of Agriculture is comprised of 16 departments namely, Agricultural Chemicals, Agricultural Economics, Agricultural Extension Education, Agricultural Meteorology and Agricultural Statistics, Agronomy, Biochemistry, Entomology, Genetics and Plant Breeding, Molecular Biology and Biotechnology, Plant Pathology, Plant Physiology, Seed Science and Technology, Soil Science, Soil and Water Conservation and Animal Science. A good number of quality laboratories have been established in the Faculty of Agriculture at various points of time, with financial assistance from various sources. Constraint of resources as well as shortage of efficient technical staff sometimes make it difficult to keep these laboratories in running condition after the expiry of the project/funding period. These facilities are available to the students for their practical classes and dissertation work leading to their post graduate studies. Keeping parity with the recommendation of the ICAR, the UG syllabus has been upgraded time to time. But to run these courses properly some new facilities are required to be developed and the existing facilities need to be upgraded. Resources for this purpose are immediately required.

Faculty of Agriculture

1. *Department of Agricultural Chemicals*

The discipline of Agricultural Chemicals was very much in existence since 1970's under the then department of Agricultural Chemistry and Soil Science. The department of Agricultural Chemicals was established in the year 2000 with the recommendation of the Government of West Bengal and accord sanction of teaching and non-teaching staffs. The discipline of Agricultural Chemicals flourished and gradually grew up to a new dimension of teaching, research and extension activities in the field of plant protection, especially in the areas of naturally occurring and synthetic pesticides.

Academic activities

- Ph. D. degree awarded : 1 student
- M. Sc. (Ag) degree awarded : 5 student
- UGC-NET :1student
- ICAR-NET :1student

Patent filed/ Laboratory developed

- Testing and training center for food and water quality laboratory is in advanced stage of development under RIDF, Govt. of West Bengal.
- Patent filed application No: 202031019890 dated 11/05/2020

Pesticide residue laboratory

Agrochemicals formulation laboratory

2. *Department of Agricultural Economics*

Since inception of our premiere university, the department of Agricultural Economics is functioning as a full-fledged department with highly and experienced faculty members. The department has a rich heritage (established in 1962 at the University of Kalyani, Faculty of Agriculture) of imparting quality teaching to meet the academic needs of the under-graduate students of all the three faculties of our university. It has kept space with the ever-changing needs of the academic situation of the country and also designed research programmes keeping in view the emerging agrarian crises of the country in general, and the state in particular. The department offers courses in the field of Micro-economics, Macroeconomics, Production Economics, Agricultural Marketing, Econometrics, Linear programming Agricultural Finance, Agricultural Project Planning and Management, Natural Resource Management, etc. The department is proud of being the alma mater of many a successful alumnus serving in prestigious positions in different reputed academic institutions, government and non-government organizations, nationalized banks etc. spreading all over the country.

3. *Department of Agricultural Extension Education*

Extension education as a subject in undergraduate course was introduced in 1950 at the College of Agriculture, Jhargram under the Calcutta University. The department started its journey under the leadership of Professor S.P. Basu, the renowned Sociologist. The Department of Agricultural Extension was established under the Faculty of Agriculture, Kalyani University in 1962. Before being shifted to Bidhan Chandra Krishi Viswavidyalaya in 1974, the department introduced its postgraduate programme in 1963 and Ph.D. programme in 1968. The department is dovetailing linkage between the stakeholders in one hand and the students, teachers, researchers on the other hand. The department not only caters various modern and cutting edge courses to the students at UG, PG and Ph.D. levels; but also dedicated to the development of innovative technologies for its lateral and downward transmission to the millions of stakeholders for sustainable development in agriculture and

ancillary sector. Training and awareness programme are the integral part of the department along with conducting researches towards generating complex and multidimensional social issues. The department is also equipped with modern laboratory like Cyber Extension Laboratory, Audiovisual Laboratory, etc.

4. *Department of Agricultural Meteorology and Physics*

The department of Agricultural Meteorology and Physics was established in 1995 as a full-fledged department under the Faculty of Agriculture. Apart from UG-PG teaching, the faculty members of the department carry out research in the field of hydrometeorology, crop-weather modeling, climate change and its impact in agriculture, climate modeling, empirical statistical downscaling (ESD), climate resilient agriculture, crop simulation modeling, remote sensing and GIS and their application in agriculture, etc. The agro meteorological observatory is operational under the aegis of this department for recording various meteorological data, utilized by scientists and students of the University for research purposes.

5. *Department of Agricultural Statistics*

This department of Agricultural Statistics is one of the unique departments of Bidhan Chandra Krishi Viswavidyalaya started its journey in the year 1974. Master's Degree Programme in Agricultural Statistics was started in 1984. The department imparts teaching and research prospects for both UG and PG level in Statistics, Mathematics and Computer Science and Information Technology to all the students across the three faculties as well as two extended campuses of the Viswavidyalaya. Designing experiments, sample survey techniques, econometric approaches in agriculture, modeling and forecasting in agriculture and related fields, biometrical works etc, are the major areas of research.

Academic activities

- Qualified ASRB NET (ICAR) : 04
- ICAR SRF : 02
- ICAR JRF : 03
- Ph D awarded : 03, submitted : 04
- One Ph. D. scholar have undergone international training programme of 6 months duration under CAAST on Conservation Agriculture, BCKV at NEOMA Business School, Rouen, France.

6. *Department of Agronomy*

The department of Agronomy is the largest department of the Faculty of Agriculture and the university as well. It has been continued from the University of Kalyani to the newly established Bidhan Chandra Krishi Viswavidyalaya in the year 1974. It deals with the science and technology of crop production interrelated with soil and climate. The department of agronomy offers courses in undergraduate, post graduate and doctoral level across the faculties of Agriculture, Horticulture and Agricultural Engineering. The students studied in this department are diverse in origin covering different states (Andhra Pradesh, Tamil Nadu,

Odisha, Jharkhand, Bihar, Manipur, Nagaland, Arunachal Pradesh, Meghalaya) as well as various countries (Ghana, Afghanistan, Myanmar).Sincere and dedicated efforts are continuously being made by all concerns of the department to produce the efficient, enthusiastic and competent students inthe field of agronomy. In addition to teaching, the faculties of the department are effectively contributing to the betterment of the farming community by engaging in various applied and operational research programme. Some of these research programmes are innovative in nature to cater the need of the state and national agricultural development.

Academic Activities

- ICAR NET : 75.
- After completion of Ph.D. degree the students have joined universities (6 No.) and private institutions (10 No.) as faculties, SMS of KVKs (7 No.), Quarantine Services and Food and Supplies.

Facilities/varieties developed

- One class room and one seminar room have been upgraded
- Rice variety released**:** Harinakhuri

Variety	Registration	Applicant	Special traits
Harinakhuri	Farmers' variety (No. 148 of 2020) on 08.06.2020 under Protection of Plant Varieties and Farmers' Rights Authority, Government of India, New Delhi	Sagar Krishnanagar Swami Vivekananda Youth Cultural Society, Sagar, South 24 Parganas, West Bengal	Adaptable to *Gangetic* delta region of West Bengal, long duration (140-145 days), tall in stature (125-10 cm), straw-coloured grain with purple spot at tip and occasional awning, yield 2.5-3.0 t/ha, white medium-slender kernel and medium aroma

Harinakhuri paddy

Hariinakhuri :Variety registration certificate

BCKV Newsletter, 2020

7. *Department of Biochemistry*

The department was started in 1998 through separation from the parent department of Agricultural Chemistry and Soil Science for keeping pace with teaching and research in the frontier areas of biochemistry as a fundamental component of agricultural science. The

earlier nomenclature of the degree programme in 'Agricultural Biochemistry' has been modified as 'Biochemistry' in compliance with that proposed by the BSMA Committee for basic sciences – ICAR. The department caters teaching and research at UG, PG and Ph. D. levels with its limited number of faculties. In the past, researches were mostly concentrated on nutrient, anti-nutrient and antioxidant components of crops with an aim to develop promising candidate(s) for their improvement in future breeding programmes. Presently, researches are focused on some chemical attributes as influenced by the agricultural techniquesand application of agrochemicals.

8. *Department of Entomology*

The department of Entomology is running full-fledged under the aegis of the faculty of agriculture which started in the year 1965. The department offers a number of courses at post graduate level leading to M. Sc. and Ph. D. Degree following the decision of Fifth Deans' Committee. Post Graduate students are being admitted through university entrance examination and ICAR allotment. The thrust areas of teaching and research are broadly grouped under economic entomology, toxicology, nematology and acarology. The department has consistently produced a good number quality students. The students are well placed in reputed international and national institutes. The department is on the verge of setting up a good quality bio-control laboratory along with other existing good quality laboratories.

Achievements

- ICAR-NET : 6
- Two Ph.D. awardees from the department have been placed as Assistant Professor in Private agricultural universities.
- One student started his own entrepreneurship in crop production system
- The pass out students have been placed in Nationalized Banks (3), Assistant Professor in Universities (2), Corporate Sectors (3), FCI (1), PPO (3), Scientist at RFRI (1) etc.
- The Department of Entomology has contributed 72 new species of phytseiid mites, 12 tarsonemid mites and 6 eriophyoid mites to the science of acarology
- The department is actively engaged for the development of National Image Base for Plant Protection (NIBPP) through artificial intelligence (AI) in collaboration with ICAR-IASRI under NAHEP component 2 Project.

Facilities Developed

- Facilities for nematode extraction, processing, mounting and microscopy have been created. A good number of dry and wet collections of rare specimens of insects are maintained; preserved specimens of pestiferous snails, slugs and nematode infested plant parts are available in the laboratory for practical demonstration to the students. Facilities for morphometric study of selective insects have been developed. Facility for rearing of greater wax moth, *Galleria mellonella* as a host insect for the recovery of entomopathogenic nematode has been developed. Device for image

capturing, measurement and transmission, recording canopy temperature, soil temperature, pH meter, analytical device and software for computation and interpretation of data are available.

- A good laboratory for Acarological study have been developed with the facilities of phase and DIC microscopy. Expertise for the taxonomic identification and description of phytoseiid predatory mites, tarsonemid mites and eriophyoid mites have been well developed. A well developed facility have been developed in the Department for repository of the type materials with proper accession.

Technology generated/Significant contribution

- Soil application of chlorpyriphos 20EC @ 2000ml ha^{-1} + bunch spray with acephate 75SP @ 750g ha^{-1} along with APSA 80 @ 200 ml ha^{-1}followed by bunch wrapping with white polypropylene sleeve fetched least infestation of leaf and fruit scarring beetle along with maximization in fruit yield of banana.
- Tetragnathid spiders showed significant high consumption rate of aphid, *Myzus persicae* followed by oxyopids. An increase in prey density had no effect on consumption rate of predatory spiders. *In-vitro* survivability of lycosid and phalangiid group of spiders was merely 2 days, whereas spiders of other families survived 7-14 days.
- Severe incidence of leaf defoliator, *Catopsilia pyranthe* (Lepidoptera: Pieridae) in *Senna sophera* (L.) Roxb. and other *Senna* sp. near C-Block Farm of Bidhan Chandra Krishi Viswavidylaya, Kalyani, West Bengal during post-monsoon period of 2020 was reported. The peak activity of the pest was noticed during October and November months infesting leaves, tender shoots, flower buds and flowers.
- Microencapsulation (MC) of *Pongamia pinnata* (L.) seed oil was prepared by interfacial polymerization between isocyanates and polyamine and tested for insecticidal and larvicidal activities. The formulation exhibited 67.0–71.8% and 62.4–74.8% control of aphid and whitefly population in aubergine at 4.0% dose following 7–14 days after application. The study unveiled its significance in developing controlled release herbal formulations of *P. pinnata*as an alternative to harmful conventional synthetic insecticides for crop protection.
- Out of forty four genotypes of faba bean, six genotypes of faba bean FLIP15-159FB, FLIP15-197FB, L-2013-014, L-2013-060 (S4), L-2013-092 (S4), and L-2014-137 were identified as highly resistant against leaf miner. The genotypes Ahmednagar Local, Bangla Gangachar, EC-25085, FLIP15-196FB, FLIP15-197FB, Gazipur Local, HB-15, HB-90, and L-2013-060 were very highly resistant to pod borer.
- In tomato, altogether 721 insects belonging to 11 species under 6 orders from the Kalyani C-Block Farm of BCKV and a total of 520 insect specimens belonging to 10 species under 5 orders have been recorded from Islampur. The most abundant order was Hemiptera in both the sites and while the least abundant orders were Neuroptera and Thysanoptera. The dominant species recorded was *Myzus persicae* (Sulzer) in both the areas.

- The rice panicle mite, *Steneotarsonemus spinki* was observed as serious pest of rice in West Bengal during wet season. It is identified as one of the major yield reducing mite species. Rice cultivars Masuri, Ranjit are tolerant and IR-36 and IET-4786 are susceptible to mite. Application of *Gliricidia* and mustard cake as organic source of nutrients reduce the mite population and increase yield. High yielding and mite tolerant rice variety BCKV Rice-1 and BCKV Rice-6 have been developed.
- Developed mass production technology of predatory mite, *Neoseiulus longispinosus* and *Agistemus industani* as the most effective bio-agents for integrated management of spider mites and yellow mite in chilli.
- Identified the false spider mite, *Brevipalpus phoenicis* 1st time as one of the damaging mite pests causing significant damage in pointed gourd.
- Established the role of whitefly as the disseminator of chilli yellow mite.

Spodoptera frugiperda* (J. E. Smith) larva on *Vicia faba

Syrphid fly adult resting on chilli plant

Pyrrhocorid bug, *Dysdercus cingulatus* Fab. draining out sap from the fruit of lady's finger

Occurrence of invasive rugose spiraling white-fly, *Aleurodicus rugioperculatus* Martin(Hemiptera: Aleyrodidae) in West Bengal

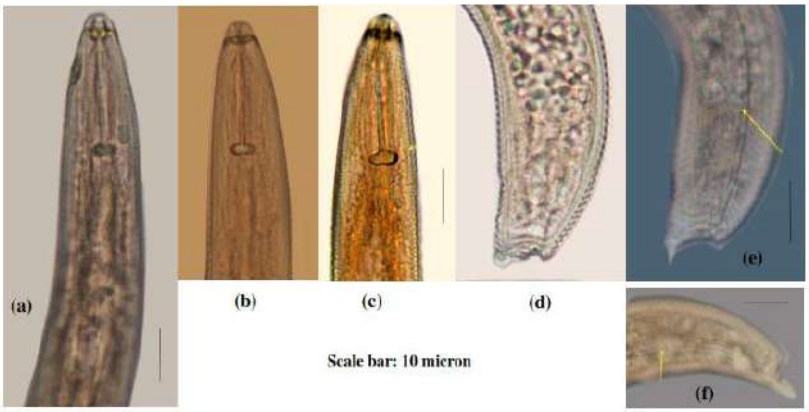
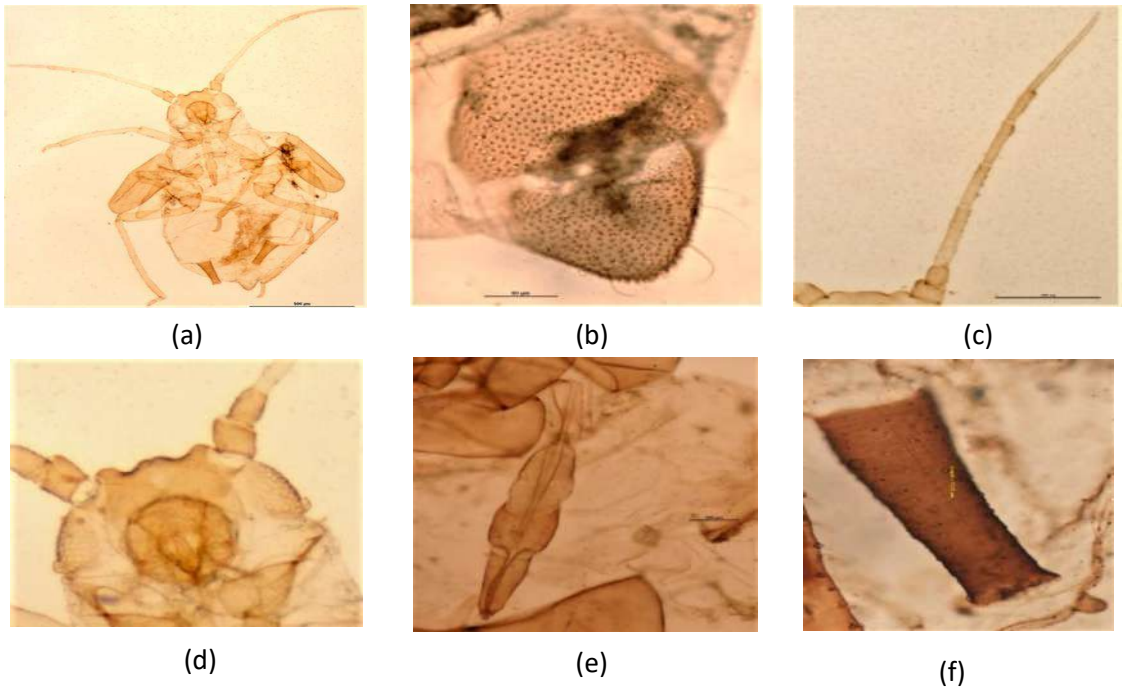


Fig. 1: *Helicotylenchus crenacauda* Sher, 1966 on rice from Gayeshpur, Nadia, West Bengal, India a-c: anterior region of female showing hemispherical head, stylet knob flattened at anterior surface; d-f: tail shape; e & f: phasmid (arrow marked) and lateral lines, inner two lateral lines end on tail in a Y- shaped pattern



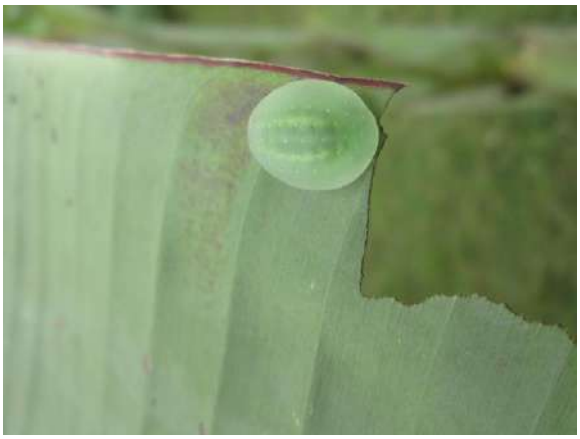
Apterous viviparous female of *Aphis gossypii* Glover; a) Habitus; b) Cauda; c) Antenna; d) Head; e) Rostrum; f) Siphunculus

Lace-wing bug of Jasmine

Psyllids on *Murraya paniculata*

An encyrtid wasp (Hymenoptera) from West Bengal

Ant mimicking spider (*Myrmarachne* sp.) from Mondouri, West Bengal



Feeding of limacodid larva on banana leaf

Infestation of scarring beetle, *Basilepta subcostata* Jacoby on banana

9. *Department of Genetics and Plant Breeding*

The department, Genetics and Plant Breeding, started its journey since the university's inception in 1974. Meanwhile, the department bifurcated into two separate departments, Genetics and Plant Breeding, in 1998 and again unified during 2012. The department is engaged with an aim to train and ignite the innovation power of the students for bringing problem-based solutions in the area of crop improvement. The department offers one compulsory and four advance courses to selected students in under graduate programme. The department also offers post graduate courses. Scores of significant research and technologies have been developed by the departmental scientists and output, of which has been used in the commercial applications. Thrust areas of research activities of the department are on *in vitro* regeneration of ornamental, medicinal and aromatic plants, identification of molecular markers linked with biotic and abiotic stress tolerant gene in pulses, vegetables, cereals etc., marker assisted breeding in rice and rice bean, genetics of plant-microbes interaction (specially of *Phytophthora*) and plant para-retro virus promoters.

Academic achievements

- ICAR NET :12
- Joined at Bank (1) and NSC (1)

Facilities developed

- A 250 sq. m of insect-proof net-house at Jaguli Instructional Farm.
- Maintaining 700 germplasms of lentil, 200 germplasms of *Lathyrus*, 190 germplasms of mungbean, 600 germplasms of rice, 300 germplasm of chickpea and 110 germplasms of urdbean.

Technology Generated

- A lentil variety, *Bidhan Lentil* 16, with yield potentiality 9.8% higher than WBL77 (1414kg/ha) is waiting for CVRC gazette notification after a final recommendation from SVRC and SSSC.
- Identified a perfect PCR-based codominant marker for the selection of plants/segergants with 50% low grain-arsenic accumulation in rice.
- Identified yield-enhancing *japonica* type SPIKE allele from an *aus* type rice landrace Bhutmuri and its allele specific codominant marker.
- IC560183, WBL77, IC 268238, BL16, and BM3 were identified as the P-deficiency tolerance genotypes with high purple acid phosphatase activities in the root.

10. *Department of Molecular Biology and Biotechnology*

The department of Agricultural Biotechnology was started in 2013-14. However, it is renamed as Molecular Biology and Biotechnology in 2021. Since its inception the department offerscourses to the undergraduate students as per the guidelines of ICAR framed time to time. The department also runs Ph. D programmes and is actively engaged in research. The thrust areas of research are molecular breeding, molecular diagnostics, recombinant DNA technology, plant tissue culture and genetic transformation, genomics and proteomics, bioinformatics.

Achievements

- ICAR-NET qualified : 5
- Jawaharlal Nehru Memorial Fund : 1
- UGC-Minority Fellowship : 1
- DBT-JRF : 1
- GATE-Biotechnology : 1
- GATE-Life Science : 1
- National Fellowship for OBC : 1
- Asstt. Prof. in University : 1
- Asstt. Prof. in Private Universiy : 2
- R & D division : 2

11. *Department of Plant Pathology*

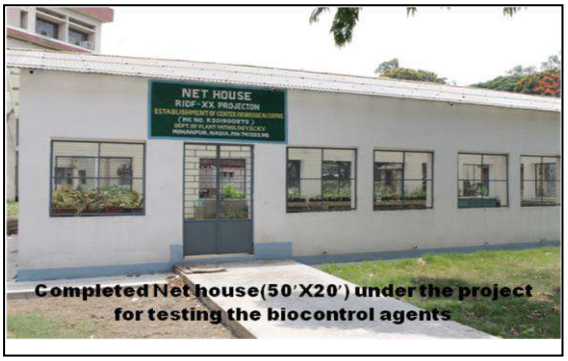
The department of Plant Pathology was initiated under the aegis of Faculty of Agriculture with the establishment of the university in 1974. Since then, the department has been offering PG and Ph.D. programme to students. Faculties of the department impart teaching and practical knowledge to the students on the basic and advanced area of the subject of mycology, plant bacteriology, plant virology and fungal pathology, particularly in the field of detection and diagnosis, biology, survival, transmission and management, plant disease epidemiology,pathogen diversity studies, molecular basis of host-pathogen interaction, mushroom spawn production and cultivation technology, bio-control agents evaluation, production and field testing, principles and procedures of seed and planting material certification, plant bio-security and bio-safety issues.

Achievements

- P. R. Verma M.Sc. Award : 2
- Bank and private Company : 3
- Identified agro-climatic zone specific (especially for coastal saline and lateritic zones) efficient strains of *Trichoderma, Bacillus, Pseudomonas fluorescens* etc.
- Gene bank accession numbers for nearly fifty isolates of *Trichoderma, Bacillus*, and *Pseudomonas fluorescens* have been obtained.
- Fifteen isolates of *Setosphaera turcica* have been sent to the Indian Institute of Maize Research for studying the diversity of the pathogen.
- Identified *Ralstonia solanacearum* free areas in Bankura, Birbhum, Paschim Medinipur, Hooghly and Burdwan districts of West Bengal for demarcating and considering those areas for the potato export zone of West Bengal.

Facilities developed

- The department has developed the Centre for Biological Control during 2020-21 with the financial assistance from NABARD through Govt. of West Bengal. One two storied building and one Net House were constructed for the purpose and the laboratory is equipped with the instrumentation facilities of Horizontal Autoclave, Carl Zeiss Trinocular Phase Contrast Microscope, Carl Zeiss Trinocular Stereo Zoom Microscope, Microprocessor Control Plant Growth Chamber, Refrigerated Bench Top Centrifuge, Gel Documentation System etc.



Completed Net house(50'X20') under the project for testing the biocontrol agents


Laboratory of the Centre for Biological Control

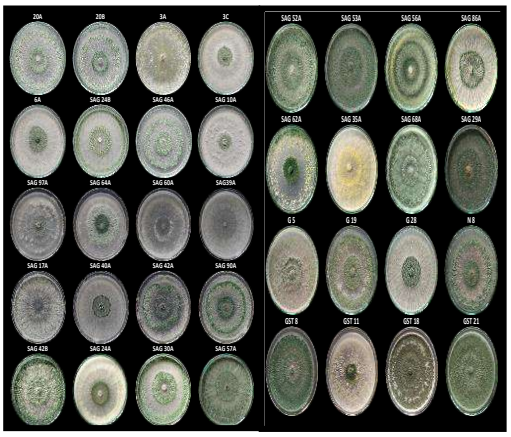
- The Advanced Plant Virology Laboratory of the Department has been upgraded with the instrumentation facilities of Environmental (Plant Growth) Chamber, ELISA Reader, Phase Contrast Microscope, PCR (normal), PCR (gradient type), Real time PCR (qPCR), Western Blot Protein Transfer System, Gel Documentation System, Ultra-Low Freezer (- 80 ºC), Freezer (-55ºC), Freezer (- 25 ºC), DNA Vacuum Concentrator, Canopy Analyzer, Chlorophyll Meter, DNA and Protein Electrophoresis Systems, BOD Incubator and Table Top Incubator, Laminar Air Flow Cabinet, Temp. Control Shaker Incubator, Table Top Centrifuge, Vortex, Balance, pH meter etc.

Molecular plant virology laboratory

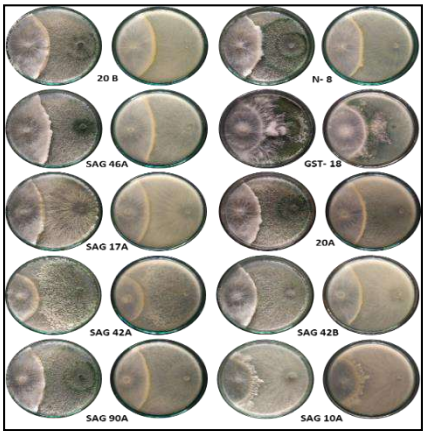
Technology generated

- The efficacy of yeasts as biocontrol agents for the management of post-harvest diseases has been proved and protocol is ready to be used.
- The department is engaged in transfer of low-cost technology of mushroom cultivation among entrepreneurs including training of unemployed youth on spawn production technology.
- A simple low-cost technology for tropical mushroom spawn production for women has been standardized.
- The seed and soil treatment of microbial consortia of native *Pesudomonas* BCLP4: *Pseudomonas fluorescence*, GP8: *Pseudomonas aeruginosa* and SS2LP25: *Pseudomonas putida*) performed very well at field level in both the seasons to enhance the cowpea plant growth with disease suppression in lateritic zone of West Bengal.
- Standardization of management schedule for banana leaf spot disease complex has been developed and recommended as technology through ICAR-AICRP on fruit.
- Successful prediction of late blight disease of potato in major potato growing areas of West Bengal through INDOBLIGHTCAST model and forecasting is being conveyed to the farmers through different media
- Six resistant lines for turcicum leaf blight and nineteen resistant lines for maydis leaf blight have been identified. Crop loss assessment for these two diseases has been done

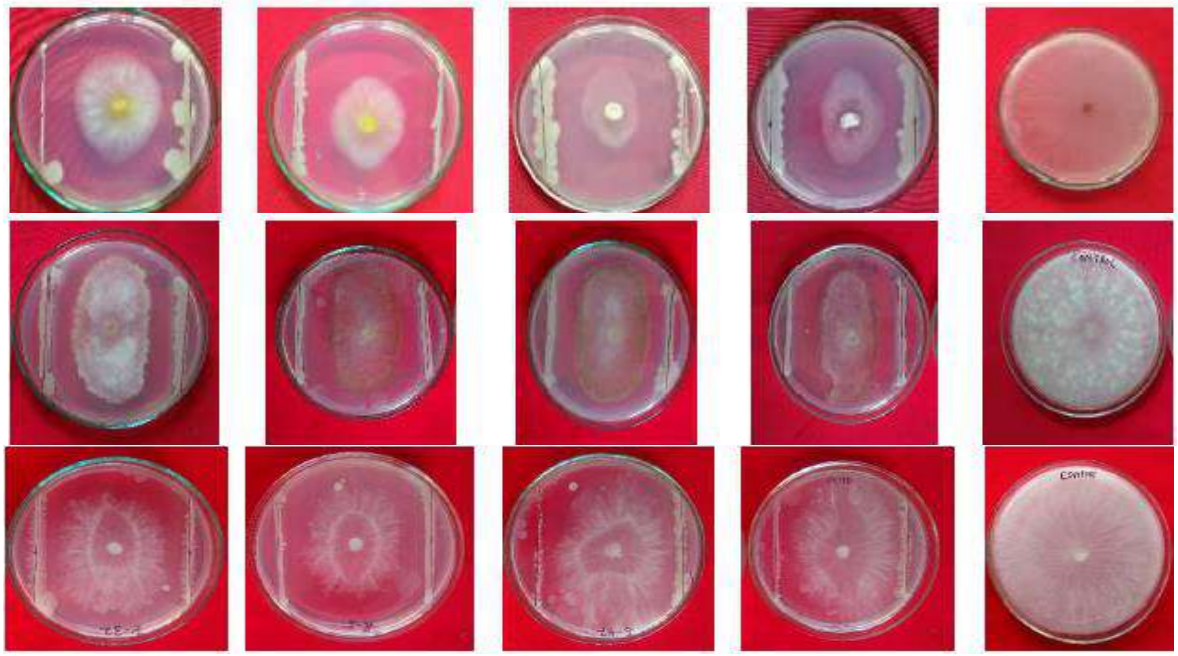
- Standardization and evaluation of grafting technology of brinjal cultivar BCB-40 on cultivated rootstock Utkal Anushree for bacterial wilt (*Ralstonia solanacearum*) resistance have been done
- Developed variety of Upland taro (*Colocasia esculenta* var. *antiquorum* (L.) Schott] Code: TCbl 12-5, Name of the collection-BCC-5, NBPGR IC-361217)- Proposed name of the Variety: Bidhan Vijaya; Recommended for Central release by ICAR, 2020; Trait- Highly resistant to Phytopthora Blight
- Developed variety of upland taro (*Colocasia esculenta* var *antiquorum* (L.) Schott] Code: TTr-12-4 Name of the collection : BCC-9, NBPGR IC-361221; Proposed name of the variety: Bidhan Mitra; Trait: High yielding, blight resistant, longer storability



Native halotolerant *Trichoderma* isolates from coastal and saline zones of West Bengal



Antagonistic potential of halotolerant *Trichoderma* isolates against *Sclerotium rolfsii*



Mycelial inhibition of different soil-borne pathogens (*Rhizoctonia solani, Sclerotinia sclerotiorum* and *Sclerotium rolfsii*) by rhizosphric native Proteobacteria

Yeast formulation and its effect on post harvest disease management

Grafting technique of brinjal for managing the bacterial wilt disease and their evaluation in sick plot and farmers' field

12. *Department of Plant Physiology*

The department of Plant Physiology has been in operation since 1999 after its establishment on 15th February, 1999 consequent upon the quadri-partitioning of the erstwhile department of Genetics and Plant Breeding. Since its inception, the department is actively engaged in catering a number of basic and advance courses on crop physiology at under-graduate, post-graduate and Ph.D. levels. Development of low cost hydroponics for growing vegetables, development of hydroponics and sand culture techniques for studies on stress physiology, metal specific staining technique for histochemical studies, standardization of *in vitro* pollen germination studies in several crops for screening heat tolerant lines, induction of regular bearing habit in mango by phyto-hormone treatment are few important achievements made by the researchers of the department.

13. *Department of Seed Science and Technology*

The department of Seed Science and Technology was created out of the department of Genetics and Plant Breeding and started functioning since February 06, 1999. Presently, this

department offers one compulsory and one elective course to under graduate students and some advance courses to Post Graduate students. Since inception, students of M.Sc. and Ph.D. are continuing their research programme on various aspects of Seed Science and Technology, especially quality seed production, seed invigoration, seed priming, pelleting, encapsulation, developmental pattern, etc.

14. *Department of Agricultural Chemistry and Soil Science*

The department of Agricultural Chemistry and Soil Science started functioning immediately with the establishment of Bidhan Chandra Krishi Viswavidyalaya after bifurcation from the University of Kalyani, 1974. Since then, the department catered teaching, research and extension in the field of Soil Science including Soil Microbiology, Agrochemicals and Biochemistry. Later on, the department was trifurcated with the creation of another two departments in the year 1998 *viz*., department of Agricultural Chemicals and Department of Biochemistry.As per the recommendation of the Vth Dean's Committee of ICAR, the academic programme has been designated as Soil Science. It offers courses in three major areas *viz*., Soil Chemistry, Soil Physics and Soil Microbiology to the students of UG, PG and Ph. D. levels. With its highly qualified teaching staff it also caters courses of the Faculty of Horticulture as well as of the Faculty of Agricultural Engineering. The Department has come out with farmers' need-based, zone-specific customized research outcomes that helped this state as well as our country to give a right direction for sustaining crop productivity as well as the quality of food and water. Doctoral degree programmes always aim to cater the problems of the farming community, which include nutrient transformation in soils and their uptake by plants, recycling of organic wastes, composting technology, soil testing, heavy metal problem, mitigation of pollutants elements including arsenic in soil and plants, evaluation of soil health and its resilience etc.

Academic achievements

- ICAR JRF qualified : 11
- ICAR NET qualifieid : 20

Laboratory developed

- Development of "Farmers' Service Centre for Soil Testing and Fertilizer Recommendation-referral laboratory".

15. *Department of Soil and Water Conservation*

The department of Soil and Water Conservation was established in the year 1996 following the notification of the Govt. of West Bengal with a view to enhance capacity building in the field of protection of natural resources against degradation in various forms and conservation of these precious and finite natural resources like soil and water. The department caters teaching programme in UG, PG and Ph.D. level. Courses are comprised of watershed management, water resources planning, management of soil degradation, remote sensing and its application in soil and water conservation planning, biological aspects of soil conservation etc.

Academic Activities

- ICAR Qualified : 1 (One)
- Joined in Bank : 2 (two)

Laboratory Developed

- General Laboratory : One
- UG Laboratory : One
- M. Sc. Laboratory : One
- Ph. D. Laboratory : One


Mulching of groundnut and maize using jute agro textiles

16. *Department of Animal Science*

This deparment is established in the year 1995, after revitalizing the department of Animal Husbandry and Dairy Science of Faculty of Agriculture, University of Kalyani, primarily to later the teaching, research and extension in Animal Husbandry in the university.

The department maintains a Livestock Instructional Farm for the purpose of practical classes, research and demonstration. Researches on broiler rabbit, *Black Bengal* goat, *Garole* sheep and broiler chicken production are being carried out in this department. The department is also interested in physical characterization, ethno-veterinary health care and ethological studies of livestock.

EXTENDED CAMPUS AT BARDHAMAN

College of Agriculture, Bardhaman

To fulfil the growing need in agricultural education and research, BCKV extended its teaching periphery with the help of Govt. of West Bengal and established College of Agriculture at Burdwan as its new campus at Agriculture Farm, Gate No.1, Kalna Road, Bardhaman. The foundation stone of the college was laid down by the Hon'ble Chief Minister of West Bengal, Smt. Mamata Banerjee on the auspicious day of July 9, 2014. Bardhaman has been selected for the new college as it yields maximum grains, particularly paddy and potato that feed the entire population of the state. Due to the presence of rivers, Damodar, Barakar, Ajoy and Bhagirathi in the district of Bardhaman, there is ample water for cultivation in different crop seasons. About 65% of the population (6.91 million as per the 2001 census) live in villages and are engaged in farming. Thus, the area has the immense capacity to increase crop yield and its diversification and College of Agriculture takes the privilege to play a vital role in disseminating the knowledge among the farmers.

College of Agriculture, BCKV has received around 73-acre land from the Department of Agriculture, Govt. of West Bengal. Out of 73 acre, 50 acre land are being utilized for different research programmes, demonstration (medicinal and aromatic plants garden, crop museum, flower museum, IFS model etc.), practical and seed production programme. Attempts are being made to develop crop, vegetable and flower museums exploiting the available resources. A paddy-cum fish culture unit and live herbarium of medicinal plants have been established for demonstration to the students. The institute being residential in nature has outstanding dwelling facilities for its students.

Achievements

- ICAR AIEEA PG-2021: 05 (ICAR-JRF)
- ICAR AIEEA PG-2021: 06 (ICAR-NTS)

Facility developed

- The College has six well equipped laboratories of Plant Pathology, Entomology, Agricultural Chemistry and Soil Science, Agronomy, Horticulture, and Agricultural Extension Education with all necessary equipments, instruments and appliances where students.

Research activities

Thrust area of research is paddy and potato crop production, protection and extension.

Research Projects under the Umbrella of the College

- NA & BID and BARC sponsored project
- RKVY project
- BCKV- AINP programme on Jute
- Ad-hoc research projects (Corporate sponsored): 15

Total research grant received: 2 Crores (approx.)

Sale proceed received: 8 lakh (approx.)

Seed production programme: Good quality paddy seed of Swarna and MTU-1153 has been started to produce at our teaching farm since *kharif*, 2020.

Plant Pathology Laboratory

Entomology Laboratory

Agricultural Chemistry and Soil Science Laboratory

Extension activities

The college of agriculture till the reporting tenure ventured various extension activities.

Farm advisory services

- Farmer's training programme conducted: 10
- No. of farmers' training programme attended by faculties as resource person: 117
- No. of farmers' visited the campus: 25,721

Krishi unnayan mela

College of Agriculture actively participated in Krishi Unnayan Mela at Bardhaman organized by Govt. of West Bengal and Confederation of Indian Industry jointly. In this mela several need based resource persons delivered subjective views during farmer scientist interaction sessions. Apart from this, students were also involved for catering their cultural activities.

Mati utsab

College of agriculture actively participated Mati Utsab at Mati Tirtha o Krishi Katha, Bardhaman organized by Govt. of West Bengal. In this programme our university BCKV installed a scientific stall in collaboration with our college. Apart from this, separate cultural programme was performed by the students at Mati Mancha.

Participation in district science fair

A science fair organized by the Science Centre under NSCM of Ministry of Culture, Govt. of India, Burdwan, West Bengal was represented by the College of Agriculture.

Faculties at Krishi Unnayan Mela

BCKV Stall at Mati Utsav

EXTENDED CAMPUS AT BANKURA

College of Agriculture, Bankura

College of Argiculture, Susunia, Bankura an extended campus of Bidhan Chandra Krishi Viswavidyalaya was established on 20th July, 2015, inspired by Smt. Mamata Banerjee, Hon'ble Chief Minister of West Bengal. This agriculture college is situated at latitude 23°19'13" North and longitude 86° 57'32" East and close to Bankura-Purulia NH-60A road (0.8 K.M) and nereby Chhatna Railway station (1.8 K.M.).

Agriculture accounts almost 70% of the Bankura district's income, whereas 80% of the farmers are small and marginal. A vast area of this district is not cultivable due to undulation of land, degraded quality morum soil and huge problem of water scarcity. Department of Agriculture, Bankura, Govt. of West Bengal involve in various agricultural activities to increase production of agricultural and horticultural crops. Beside education programme, College of Argiculture, Susunia, Bankura was established with view to make farmers field cultivable by providing technology, knowledge, training and planting materials.

Achievement

- Ayantika Ghosh (Rank-AIR 21) in Agril. Biotechnology under ICAR AIEEA PG-2020 (Presently studying M. Sc. (Ag.) in Plant Biochemistry at UAS, Bangalore).
- Madhurya Ray (Rank-AIR 38) in Agril. Biotechnology under ICAR AIEEA PG-2020 and later on qualified ICAR-JRF (Presently studying M. Sc (Ag) in Crop Physiology at UAS, Bangalore).
- Soutrik Mukherjee (Rank-AIR 10) in Agril. Statistics under ICAR AIEEA PG-2020
- Soumita Bera (Rank-AIR 20 SC) in Agril. Entomology under ICAR AIEEA PG-2020
- Shambhunath Ghosh (Rank-AIR 50) in Agronomy under ICAR AIEEA PG-2020
- Soumyajit Ghoshal (Rank-AIR 15) in Physical Science under ICAR AIEEA PG-2020
- Sujit Kumar Bhuniya (Rank-AIR 30) in Physical Science under ICAR AIEEA PG-2020
- Ankita Roy (Rank-AIR 27 SC) in Physical Science under ICAR AIEEA PG-2020
- Sayani Basu (Rank-AIR 164) in Plant Science under ICAR AIEEA PG-2020

Facilities developed

- Plantation of 38 species of fruit trees and medicinal plants has been developed.
- Germplasms of 79 local rice varieties have been collected, grown and maintained in the farm.

RAWE- 2020:27 students participated in RAWE programme

Field visit and collection of plant samples for pest and disease diagnosis

Discussion with village Entrepreneur

Discussion with farmers and entrepreneur in the village

ACADEMIC DIVISIONS

Faculty of Horticulture

The Faculty of Horticulture created by the Government of West Bengal in 1996 after upgrading the erstwhile Department of Horticulture under Faculty of Agriculture. At present, Faculty of Horticulture consists of five departments *viz*., Fruit Science, Vegetable Science, Floriculture and Landscape Architecture, Plantation, Spices, Medicinal and Aromatic Crops and Post Harvest Technology. The Faculty offers 4 years (8 semesters) undergraduate course named B.Sc. (Hort.) Hons., 2 years (4 semesters) M.Sc.(Hort.) degree and Ph.D. degree (minimum 6 semesters and maximum 10 semesters) at the department level. The Faculty has always upgraded its course curriculum as per the guidelines of the ICAR. The new U.G. syllabus (as per 5th Deans' Committee recommendation) has been implemented since 2015. Faculty of Horticulture has introduced "Rural Horticultural Works Experience" in the 7th semester and "Experiential Learning" programme in the 8th semester.

Faculty of Horticulture

Horticultural Research Station, Mondouri, under Faculty of Horticulture is unique in its kind and a must destination of the dignitaries in their visit to the Viswavidyalaya. This research station has been developed by the erstwhile department of Horticulture in an abandoned land where accessibility was really difficult at one time. The entire area of the farm has been allotted to 5 departments of the Faculty of Horticulture and three All India Co-ordinated and one network projects. Besides, it is the germplasm repository of many tropical fruits, vegetable, plantation, tuber and spice crops. The legendary scientist and World food prize winner Padma Shree Prof. Gurdev S. Khus after paying his visit remarked that "It is the best germplasm collection of horticultural plants anywhere in the world".

1. *Department of Fruit Science*

The full-fledged department of Fruits and Orchard Management was created in the year 1996 with the upgradation of the department of Horticulture to the level of Faculty of Horticulture consisting of five separate departments. The departmental research work (PG and Ph.D.) are

mainly centered at the Horticulture Research Station, Mondouri on 20 fruit crops, the thrust areas being germplasm conservation and utilization and standardization of production technologies. Impetus to the research activities on different aspects of fruit crops came with the establishment of two centres of the All India Coordinated Project, I.C.A.R. on Tropical fruits and Sub-tropical fruits which later merged as one project, All India Coordinated Project on Fruits, being operative at Horticultural Research Station, Mondouri, Regional Research Station, Gayeshpur and Banana Resource Centre, Mondouri.

Academic achievement

- Two students from Afganistan completed PG programme
- Ph.D. students enjoying following fellowships at All India and state level for pursuing Ph. D. degree
  - INSPIRE Fellowship – 1
  - SRF (ICAR) - 1
  - National Fellowship for SC (NFSC) – 1
  - National Fellowship for ST (NFST) - 1
  - National fellowship for person with disabilities - 1
  - Swami Vivekananda Non NET fellowship (SVNNF) - 6
  - ICAR JRF – 1
- One student qualified for ARS and five students for NET
- The students after completion of PG and Ph.D. program have joined in several prestigious jobs like
  - Assistant Professor – 4
  - Assistant Director of Horticulture (Govt. of West Bengal) – 10
  - Agriculture Officer in Nationalized Bank – 4
  - Coconut Development Board – 1

Income generation of the Department of Fruit Science by selling planting materials of Dragon fruit during 2020-21: Rs 64,815.00

Facility developed

Three orchards have been developed by the Department of Fruit Science at Horticultural Research Station, Mondouri of BCKV during 2020-21.

- Temperate fruit crops orchard - 1
- Ber orchard (var. Sundori)– 1
- Lemon orchard (var. Baromasia) – 1

Technology generated

Standardization of pruning technique in dragon fruit.

2. *Department of Vegetable Science*

Vegetable crop science used to be taught within the domain of Horticulture at the onset in 1952 at Ranikuthi at the State Agriculture College as 3-year B.Sc. (Ag.) degree course, affiliated to the University of Calcutta. It continued at Mohanpur from 1958 with a new name called "Birla College of Agriculture". This college was merged with the University of Kalyani as the Faculty of Agriculture in 1960 and a separate department of Horticulture with vegetable crops as a subject came into being. Proper attention to vegetable research was given with the establishment of a centre of the All India Coordinated Project, I.C.A.R. on Vegetable crops in 1975 and on Tuber Crops in 1976 to deal with tropical tuber crops (other than potato). By this time, an adhoc project on "Vegetable Breeder Seed Production" under National Seeds Project sponsored by the National Seeds Corporation and ICAR has been sanctioned to the department of Horticulture in 1984, which continued up to 1993 to intensify the production of breeders' seed of different vegetable crops. After 36 years of existence as a specialized subject in the department of Horticulture, a full-fledged Department of Vegetable crops came into existence in 1996, and since then it is engaged in active academic and need based fundamental research on vegetable crops, serving the interest of the students, farmers and other stakeholders.

Achievements

Employment accomplishments of the students

Employment accomplishments of the students is presented below

- Assistant Director of Horticulture: 20 students
- Assistant Horticulturist, Govt. of West Bengal: 1 student
- Agricultural Development Officer in Nationalized Bank: 8 students
- Assistant Professor: 2 students
- Breeder in private seed company: 2 students

Development of Varieties

Bidhan Suphala (BCB-40): This brinjal (long) variety has been developed by hybridization and selection from a cross between Bidhan Supreme (BCB-11) and Punjab Sadabahar. The proposed variety matures early (within70 days after transplanting, DAT) and gives yield of 300 q/ha.

Bidhan Sahebmukto (BCO-1): The okra variety has been developed by hybridization and selection from a cross between VRO-6 and Mukta. The proposed variety matures early (within 45 days after sowing, DAS) and can easily be fitted well in intensive cropping system. Highly resistant to YVMV disease and it gives yield of 103 q/ha.

Bidhan Suphala

Bidhan Sahebmukto

Technology generated

- Isolation of promising mutants in tomato and bitter gourd
- Multiparus cyme mutant of tomato
- Dark green fruit mutant of tomato
- Development of gynoecious sex form and high nutritional quality mutants in bitter gourd
- Framed breeding strategy for developing tomato rich in both lycopene and anthocyanin contents

Facility Developed

Large repository of cultivated and wild vegetable germplasm and mutant genes especially tomato, brinjal, bitter gourd, snake gourd, winged bean etc. are being maintained.

3. *Department of Floriculture and Landscaping*

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

4. *Department of Plantation, Spices, Medicinal and Aromatic Crops*

The full-fledged department of Plantation, Spices, Medicinal and Aromatic erstwhile department of Spices and Plantation crops was created in the year 1996. The departmental research work (M.Sc and Ph.D.) are mainly oriented on different spices and plantation crops particularly, onion, garlic, chilli, ginger, turmeric, black pepper, seed spices, betel vine, cashew nut, coconut and arecanut, and the thrust areas being germplasm conservation and evaluation, standardization of production and propagation technologies. Impetus to the research activities on different aspects of spices and plantation crops came with the establishment of two centres of the All India Coordinated Project, ICAR on cashew nut at RRS, Jhargram and AICRP on palms at HRS, Mondouri.

Achievements

- Creation of Indian Cashew APP in 10 languages for different aspects of cashew.
- Planting materials of both spices and plantation crops have been distributed to the farmers of different districts through MIDH on Spices, AICRP on Spices, AICRP on Palm and AICRP on Cashew attached to the department.

5. *Department of Post Harvest Management*

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

Technology generated

- Development of protein enriched bar using locally available fruits like mango, jackfruit, palmyran palm etc.
- Development of pulse enriched value added products like fruit bar, toffee, eggless cake etc.
- Standardization of packaging and storage of cut tuberose spikes, loose tuberose chains and marigold garlands for distant market
- Value addition of flowers by tinting, drying, glycerinisation and other low cost processing techniques like solid state fermentation have been developed.
- Protocol development and value addition of tuber crops with special emphasis on semisolid and dried food products.

Mango RTS

Protein enriched bar

Fruit wine

Onion slices stored with irradiation

Amlaki morabba

Dried bittergourd

Tinted spikes of tuberose

Dry flower stall at krishi mela

Faculty of Agricultural Engineering

Agricultural engineering education 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. Agricultural engineering education addresses issues relevant to social and technological development of the farmers. The goal of the faculty of agricultural engineering is to educate students in the field of engineering so as to prepare them for careers in agricultural engineering in which they will become leaders in industry, the profession and to conduct quality research by applying engineering principles to solve problems of agricultural system.

Faculty of is comprised of four departments namely, Farm Machinery and Power, Food Engineering, Post Harvest Engineering and Soil and Water Engineering.

Faculty of Agricultural Engineering

1. *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 centres across West Bengal. The department is also looking forward to identify research priority areas in farm mechanization in collaboration with major stakeholders.

2. *Department of Food Engineering*

The department of Food Engineering is one of the four constituent departments under faculty of agricultural engineering. It covers wide range of areas like thermodynamics, transport phenomena, refrigeration and cold storage, dairy and food processing, food plant equipment design, food packaging technology, bioprocess engineering, dairy and food product technology etc. The department is engaged in teaching, research and extension activities to create skilled human resources for rapidly growing food processingsector. The main mission of the department is: a) to provide knowledge and skills for better preservation, processing and value addition to agro-products, with the aim of supporting the producers, b) to promoteresearch and development for product and process and assurance of high level of hygiene and safety ofprocessed food, and c) to promote food safety laws and regulations for supporting a competitive, modernand safe food market for the consumers.

RO plant to supply of soft water to SAVARS cooling chambers made by PUF panels for storage of fruit and vegetable

3. *Department of Post Harvest Engineering*

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

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

4. *Department of Soil and Water Engineering*

This department has been established in the year 1996 when the faculty of agricultural engineering came into being in this university though the university used to offer Post Graduate course in soil conservation since 70's to 1996 under department of agricultural engineering where most of the teachers of this department were attached. Since its inception this department is engaged in research and extending expertise support to State Govt. departments *viz.*, water resource investigation and development department (WRIDD), West Bengal Agro-Industries Corporation, Department of Horticulture.

Research Division

Directorate of Research

AINP on Agricultural Acarology

The AINP on Agricultural Acarology has been under operation at BCKV since 1988 with mandate of documentation of mite problems in horticultural crops, maintenance, production and utility of predatory mites, developing expertise in the taxonomic identification of tarsonemid mites, exploration of natural enemies of mite and standardization of mass production of prey mite and predatory mite.The project has developed a well-equipped laboratory.

Population dynamics of panicle mite *Steneotarsonemuss pinki*on rice and eriophyid mite *Aceria tulipae* on garlic and spider mites on rose and marigold have been studied and the occurrence of the mite population has been found to be highly correlated with the host phenology and the prevailing weather parameters. Predatory mite *Neoseiulus imbricatus* was found as the predominant species in rice. Some sheath mite tolerant rice lines, BCKV-2, BCKV-6 and Gobindabhog were identified. So far as phytophagous mite species *Polyphagotarsonemus latus, Tetranychus urticae*, *Schizoteranychus baltazari* and *Eutetranychus orientalis* cause enormous damage to chilli crop. The variety Bidhan Chilli-4 was found to be the least susceptible to yellow mite followed by Suryamukhi and Suryamukhi Black.

Six species of predatory mite belonging to genera *Amblyseius, Euseius, Phytoseius, Typhlodromus* and *Indoseiulus* were recorded in garlic. Two major phytophagous mites *viz*, *A. tulipae* and *P. latus* were documented and considered as key mite pests in garlic. The variety Katki was found to be the least susceptible to garlic mite. In rose, *Amblyseius largoensis* was the most dominant predatory mites followed by *Typhlodromus syzygii.* Among phytophagous mites, *T. urticae*is dominant followed by *E. orientalis*in rose. Seasonal fluctuation of red spider mite, *T. urticae*on rose was monitored and mite population increased from April and reached a peak during the month of May due to high temperature. Diversity of mite fauna associated with sugarcane, mulberry and different agro-horticultural crops were documented. The project has conducted many training programmes for the ST farmers and distributed sprayers and other critical inputs among the farmers.


Training and distribution of sprayer to the farmers by AINP on Acarology

AICRP on Agroforestry

The project has started functioning at BCKV since 1983 at RRS, Jhargram. The mandate of the project includes screening of selected plant species for compatibility in agroforestry systems, optimization of tree crop combination, performance enhancement of the local predominant agroforestry systems as well as improvisation of the existing technologies for higher productivity and sustainability. Sixty acres in-farm plantation of different agroforestry systems has been developed.

Identified suitable trees (Gamhar, akashmoni, eucalyptus, sal, teak, mehagani, babla, siris, sisoo, kadam and bamboo for timber and fuel; arjun, jam, bahera, haritaki, tentul and amlaki for medicinal purpose; neem, karanj and mahua for TBOs; subabool, glyricidia and jack fruit for fodder; radhachura, krishnachura and simul for social forestry), intercrops (rice, mustard, pegion pea, elephant foot, yam, turmeric, black gram, green gram, groundnut, Lady's finger, bottle gourd, maize, jute) and agroforestry model (Mango + eucalyptus and mango + gamhar based agri-horti-silvi system in red and laterite zone; mango + lomboo as boundary plantation based; guava based agri-horti system; ber based agri-horti system in alluvial soil and homestead agroforestry)for West Bengal. Many capacity building programmes for the SC and ST farmers were organized.

Agroforestry models developed by AICRP on Agroforestry

AICRP on Agrometeorology

AICRP on agrometeorology at BCKV was started in 1984-85. The mandate of the project includes assessment of crop production potentials in different agro-climatic regions, establishment crop weather relationships for the major rainfed and irrigated crops in different agroclimatic regions of the state, evaluation of crop microclimate management options for improving the water use efficiency and crop productivity and assessment of weather influence on pest and disease infestation of field crops.The project has got several micro-meteorological instruments, like net radiometer, PAR sensor, pyranometer, soil thermometer, IR thermometer, UV-biometer, assman psychrometer, anemometer and others.

Crop-weather relationship between kharif rice and green gram was studied during this year and agro-climatic requirements of these two crops were worked out. The project has extended National Agromet Advisory Services on weekly basis and contributed towards NitiAyog on monthly basis. Imparted training to the scheduled caste farmers, and distributed inputs and farm implements.

Training of SC farmers byAICRP on Agrometeorology

AICRP on Chickpea

The AICRP on chickpea has started functioning at this University in 2015 with the mandate of collection, evaluation and conservation of germplasm, technology development and validation (crop improvement, production) and technology dissemination through Front Line Demonstration (FLD). Several FLDs for popularization of improved varieties have been conducted in different districts of West Bengal.

Front line demonstrations conducted by AICRP on Chickpea

AICRP on Cashew

The AICRP on cashew was started at BCKV during 1984. The mandate of the project includes germplasm collection, selection, conservation and hybridization, as well as multi-locational evaluation of varieties under different management practices and study of different biotic and abiotic factors on the incidence of pest.

Training programmes conducted by AICRP on Cashew

The project has established cashew plantation of nearly 15 hectares and a good nursery blocks for generation of good quality planting materials for distribution among the farmers.

The project organized many training programmes for popularizing cashew cultivation, protection and processing of both cashew nut and apple in small scale for tribal farmers under TSP programme. The project has established 4.0 ha cashew plantation at Paschim Medinipur and Jhargram district under SCSP programme.

AICRP on Fruits

The project started functioning at BCKV since 2014. This project was merged with Tropical and Sub-tropical fruits with mandate of collection, characterization and in-situ conservation of germplasm, evaluation and selection of varieties, development of suitable agro-techniques and plant protection modules for fruit trees.

Developed a well-equipped laboratory and a well fenced nursery block at experimental premises,Mondouri for raising of largescale production of quality planting materials.Management of banana pseudostem weevil through bio-inoculants and development of effective strategies for management of rhizome rot disease of banana have been done.

Organized many training programmes onproduction, protection and value addition of fruit crops for the SC and ST farmers, distributed critical inputs among the farmers, conducted many FLDs. Regular advisory service has been extended to the farmers through WhatsApp, mobile etc.

Field laboratory and training programmes conducted by AICRP on Fruits

Distribution of planting materials and imparted training to input dealers

AICRP on Floriculture

The AICRP on floriculture has been transferred to BCKV during 1977 from NBRI, Howrah, West Bengal. The mandates of the project include maintenance of genetic resource and evaluation, breeding of new varieties, standardization of agro techniques, plant protection measures, post harvest technologies, value addition and dissemination to the growers.

The project has established five naturally ventilated Hi-Tech Poly house, one shade house, one potting shade, one tissue culture laboratory, one general laboratory, one post harvest technology laboratory, one orchid house, one anthurium house and one adenium house.

Standardized phenophase based nutrient management protocols in tuberose, chrysanthemum and china aster; growing media for pot plant production of Agalonema, Dracaena, and Spathiphyllum; pre-treatment, primary packaging and value addition of tuberose; dry storage of *Nephrolepis*; production of dried marigold powder through solid state fermentation of marigold. The dried powder was successfully used for improving egg yolk colour as a feed mixture at University Research Farm. Conducted two training programmes for the farmers; attended Krishi Mela organized by KVKs and flower show organized by different NGOs, Municipalities etc.

Bidhan Marigold-1

AICRP on Forage Crops and Utilization

The AICRP on forage crops at BCKV has been running since 1971-72. The mandate of the project includes collection, evaluation, maintenance and improvement of forage germplasm, identification and characterization of underexploited or unexplored plant species, nucleus and breeder seed production of ricebean and coix as well as development of location specific package of practices.

The project has established of a "Golden Jubilee Forage Garden" at Central Research Farm, BCKV, Gayeshpur, Nadia .

The project has produced the following quantity of forage seed of improved varieties

a) Breeder seed production:

Bidhan Rice bean 1 - 60 kg; Bidhan Rice bean 2 - 20 kg; Bidhan Rice bean 3 - 5 kg; and BidhaCoix 1- 12 kg

b) Nucleus seed production:

Bidhan Ricebean-1 – 6 kg; Bidhan Ricebean-2 – 5 kg; Bidhan Rice bean-3 - 3 kg; and (BidhaCoix - 1) – 4 kg

c) TFL seed production

Oat (cv. Kent) – 20 kg; lathyrus (cv. Prateek) – 20 kg; Bidhan Rice bean 1 – 25 kg; Bidhan Rice bean 2 – 10 kg; and BidhaCoix - 1 –5 kg

d) Production of BN hybrid

BN hybrid (CO-3) : 9000 cuttings; BN hybrid (CO-4) : 8000 cuttings (Approx.); BN hybrid (CO-5) : 10000 cuttings.

Foliar application of micronutrient (molybdenum @ 0.05% twice at pre flowering stage and pod development stages)proved to be beneficial in terms of growth, yield and economics of mungbean.No-de-topping in case of fodder and grain type maize varieties proved better and recorded higher net monetary return and B:C ratio

Organized many training programmes during *kharif* and *rabi* seasons under TSP programme at different blocks of Paschim Medinipur and Bankura districts. Conducted FLDs in many places with popular forage crop varieties. Distributed planting materials of improved varieties and other critical inputs among tribal farmers.



Training programmes conducted by Forage Crops and Utilization **Germplasm block crops**

AICRP on Groundnut

The project was established at BCKV in 1994 at RRS, Jhargram. The mandate of the project includes evaluation, screening, identification and hybridization of situation specific short duration varieties / breeding lines with high yield and resistant to biotic and abiotic stresses, development of new crop production technology, and dissemination of technology to the farming community.

The project has set up good laboratory facilities at RRS, Jhargram. Supplementation of bio-formulation along with NPK liquid grade fertilizer increased the pod yield and economic return of groundnut.Seed inoculation of phosphorus build up strains of DGRC is beneficial for enhancing the pod yield and economic return of groundnut.

Conducted of 65 numbers of Front Line Demonstration (FLD);85 numbers of Demonstrations under Tribal Sub Plan (TSP) and 65 numbers of Demonstrations under Scheduled Caste Sub Plan (SCSP).


Nucleus Seed Production and Farmers'Training programme of AICRP on Groundnut

AICRP on Honeybees and Pollinators

The project became operational at BCKV since 2015 with the mandate of conservation and sustainable use of pollinators to promote coordinated action across the country. The project has established three roomed apiculture laboratory, honey processing unitanda dedicated training hall with fund support from RKVY.

Techniques for studying bee–foraging through palynological analyses have been standardized.Distribution and abundance of different honeybee species in West Bengal have been mapped.

Organized beekeeping and pollinators awareness day; World Honeybee day; training for women self-help group on dearth period management and Queen grafting of *Apismellifera*.

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

AICRP on Integrated Farming Systems

The AICRP on integrated farming systems started functioning in 1968 as All India Coordinated Agronomic Research Project and afterwards renamed as AICRP on Integrated Cropping Systems in 2009-10. The on-station and on-farm components of the project are presently under operation in the New Alluvial Zone of West Bengal.

An integrated farming system model has been developed for 0.66 ha land holding to support a family of 6 members comprising 4 components: crop (0.43 ha), horticulture (0.11 ha), dairy+ vermicomposting+ biogas unit (0.03 ha) and fishery unit (0.09 ha); synthesized IFS Model recorded net return of Rs. 48,935/- during 2020-21; The IFS model generated employment of 328 mandays and 88 kg N, 44 kg P_2O_5 and 41 kg K_2O through recycling andvermicomposting; Inputs purchased from outside and inputs recycled within the system were 37.42% and 25.91%, respectively; while farm labour engaged accounted for 36.67% out of total cost of production during 2020-21, the Model climate smart (net GHG emission - 3012.7 kg CO_2equivalent).

Rice-potato-jute system was found superior on the basis of yield and economics (B: C ratio 1.51) as compared to traditional rice-rice system. *Dhaincha*/rice- french bean-cowpea system was found to be better for maintaining soil health at the same time for realizing higher yield and economic benefit (B:C ratio 4.59). It was noted that rice (bio-fortified)-sunflower-black gram was comparatively better (B:C ration 3.89) in respect of family nutrition. Elephant foot yam- brinjal + coriander leaf system proved to be better system in respect of generating higher yield (REY 85895.9 kg/ha) and economic return (B:C ratio 7.06).

On-farm farming system research was conducted with 24 farmers (marginal) in two blocks, namely Krishnagar-I and Chakdah, where four farming systems were identified viz. crop+dairy, crop+dairy+fishery, crop+horticulture+dairy and crop+poultry+fishery. Different technological interventions resulted in highest net return of Rs.1,87,695/- in crop+dairy system with the intervention cost of Rs. 4291/- followed by crop+horticulture+dairy, where net return and intervention cost were Rs.143,008/- and Rs.3687/- respectively. In another on-farm trial highest net return of Rs. 2,21,132/- with cost of intervention of Rs. 4849/- in crop+horticulture+dairy system was observed followed by crop+dairy+fishery withnet return of Rs.2,01,536/- and cost of intervention Rs.6,181/- for small and marginal farmers.

Organized many training programmes for SC farmers and distributed critical inputs to the farmers on the basis of their requirements for augmenting farm production and income.

Different units of IFS model

AICRP on Irrigation Water Management

The project has started functioning at BCKV in 1982. Important recommendations include irrigation at IW/CPE0.8 with Zn @ 10 kg/ha of $ZnSO_4$ for increased yield and maximum water productivity in wheat-green gram cropping sequence; Furrow irrigation with black polythene mulch in sweet corn for higher crop and water productivity; gravity-fed drip irrigation at 0.8 ETc with 100% RDF for highest yield and water use efficiency in Indian jujube. Imparted many training programmes for the farmers.

AINP on Jute and Allied Fibres

The project started functioning at BCKV since 1974 with mandate of conducting varietal evaluation trials, maintain, characterize, and screen germplasm to improve fibre yield by breeding works, standardizing the management practices of INM, IWM, drought management, carry out adaptive research and TSP program for dissemination of recommendations of concluded research. The project has established good laboratory facilities. Organized many training programmes for the tribal farmers under TSP programme.

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

AICRP on Maize

The AICRP on Maize has been operated at BCKV since 2015. The project has developed a good laboratory with facilities for pathological and agronomical works. Weed management system and optimization of potassium fertilizer for maize has been standardized. Yield loss against important diseases of maize has been assessed and IDM module has been developed. Organized many farmers' training programmes; conducted FLDs under SCSP and TSP programmes; distributed critical inputs among SC and tribal farmers.

AICRP on Medicinal and Aromatic Crops and Betel vine

The AICRP on betel vine has started functioning at KalyaniCentre, BCKV during 1984. Later on AINP on Medicinal and Aromatic Plant was merged with AINP on Betelvine in the XIth plan. The mandate of the project includes collection, maintenance, evaluation and cataloguing of germplasm, to appraise the disease and pest situation and development of IPM protocols, development of economically viable agro techniques.The project has established good laboratory facilities. Conducted a training programme onscientific cultivation technique of betelvine" for the the inputs dealers under DAESI Course.

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

The AICRP on MULLaRPhas been operated in BCKV since 2015. Identified high yielding mungbean entries BCM-18-1 and BCM-18-2; Urdbean entry PBU-18-1 and lentil entry BLS-1707-9 which are under coordinated trials. Standardized fertilizer doses and bio-inoculants for improved grain yield of kharif urdbean, lentil and lathyrus. Developed IPM modules for the effective management of sucking pests and white fly in mungbean, lentil and field pea. Recommended Rynaxypyr @ 25.0 g a.i./ha in reducing pod borer population and productivity of field pea. Organized one Farmers' training programme on "Quality seed production" and conducted many training programmes for the tribal and SC farmers.

Traningprogrammes for SC and ST farmers organized by AICRP on MULLARP

AICRP on Nematodes in Agriculture

The project has been started functioning at BCKV since 1988. The project has developed good laboratory facilities and Net house. The Project has standardized nursery bed treatments against *Meloidogyne graminicola* populations in soil. Application of Fluopyram 400 SC @ 1000 g a.i./ha in basin area or Fluensulfone 2% GR @ 1.2 g a.i. (60 g formulation)/plant manually in basin area was found effective against root knot nematode (*Meloidogyne incognita*) in guava. Organized 15th Nematode Awareness Day programme on July 07, 2020. Imparted training to the farmers, Input dealers, SMS, farm manager and programme assistant (Lab. technician) of the KVKs.

AINP on Onion and Garlic (Voluntary Centre)

This voluntary centre started at BCKV during 2008. Some promising accessions, RVB-20-01, RVC -20-48 of kharif onion and RVC20-22, RVB 20-13 of rabi onion were found suitable. Garlic accessions, GN20-11, GN 20-48 were found suitable in the Gangetic plains of West Bengal. Conducted many training programmes for the farmers on production and protection technologies of onion and garlic at different districts of West Bengal.

AINP on Pesticide Residues

The project became operational at BCKV with mandate of organizing research on pesticide residues in agricultural produce and other components of the environment. The project has established a very well equipped NABL accredited laboratory. More than 90% commodities were free from pesticide residues and a negligible per cent exceeded the PFA/ CODEX MRL value. The occurrence of residues in different food commodities ranked in the order of Coriander leaves> Tea > Vegetables > Fruits > Fish > Cereals > Water. The occurrence of fungicide, carbendazim and insecticide, chlorpyrifos in vegetables and fruits predominates over other pesticides.

AICRP on Palms

The project was established at BCKV in 1982 with mandate of collection, conservation and evaluation of location specific germplasm and cross combinations, evaluation of Dwarf × Dwarf hybrids, establishment of mother blocks and production of quality planting materials, demonstration of released coconut varieties, coconutbased cropping system with spices and tuber crops. Conducted several training programmes for the farmers and input dealers.

Training programmes organized by AICRP on Palms

AICRP on Potato

The AICRP on potato at BCKV has become operational since 1972. The project has set up well equipped laboratory. Identified three promising varieties, KufriNeelkanth, Kufri Ganga and Kufri Lima for the Gangetic plains of West Bengal. Two new varieties (KufriHimalini andKufriKhyati) have been introduced in farmers field and gaining farmer's acceptance which can replace KufriJyoti. Foliar application of boron alone or in combination with zinc (3 sprays) along with RDF significantly increased the tuber yield. Application of RDF of NPK + 4.5 kg zinc in soil per ha as basal found to increase the yield of potato significantly in Zinc deficient areas. A late blight forecasting (INDO BLIGHT CAST) model has been developed and validated.Afore-warning system for the occurrence of aphid has been developed. Participated in different Krishi mela, kisan sangosthi and farmers 'training programme organized by KVKs, NGOs, GoWB etc.

Training programmes conducted by AICRP on Potato

Participation in Krishi Mela by AICRP on Potato

AICRP on Pulse Seed Hub

The project has started functioning at BCKV in 2016 with a view toincreasepulse seed production. The project has developed a godown and processing unit at Teaching Farm, Mondouri, BCKV. The following quantity of seed materials produced by the project.

Season	Crop	Variety	Seed production (quintal)		Category of seed
			Tar	Ach	
A. *Kharif*	Urdbean	PU-31, Sulata	50	15	F/C
	Mungbean	Virat, IPM 02-03, PUSA 1431	50	25	F/C
	Lentil	L-4717, L-4727, HUL 57,IPL 526, IPL316, KLS 09-03 , IPL 220	400	475	F/C
B. *Rabi*	Chickpea	JAKI 9218, Bidisha	40	55	F/C
	Field Pea	IPFD-10-12	10	2	F/C
	Lathyrus	BidhanKhesari 1, Ratan, Preteek, Mahateora	350	400	F/C,/TL
C. Summer	Urdbean	PU-31, Sulata, IPU 02-43	50	85	F/C
	Mungbean	SML 668, Virat, IPM 02-03	50	80	F/C
Total			1000	1137	

Godown and Seed processing unit developed by AICRP on Pulse Seed Hub

AICRP on STCR (Soil Test Crop Response)

The project started functioning at BCKV in 1994. The project developed targeted yield equations for vegetable crops like brinjal and capsicum. Previously developed TYE's for various crops like rice, potato, onion, mustard, pointed gourd, cabbage, cauliflower, broccoli, tomato, etc. were mass demonstrated. Evaluated the suitability of multinutrient extractants for estimating available phosphorus and potassium in soil for nutrition of wheat. Among multinutrient extractants under study, Mehlich 3 emerged most suitable extractant for available P and K in inceptisol.STCR based recommendation of Coromandel-Customized Fertilizer Grades ($N:P_2O_5:K_2O:S:Zn:B::12:16:18:6:0.6:0.1$) and ($N:P_2O_5:K_2O:S:Zn::12:22:18:5:0.5$) targeting yield of 35 tha^{-1} in potato (cvKufriJyoti) and 8 tha^{-1} in transplanted paddy (cv *IET-4786*) appeared to be most efficient in terms of yield, nutrient use efficiency, post harvest soil fertility and economics in West Bengal.

Organised Farmers Training and Students Awareness Programme on the occasion of "World Soil Day" and "Azadi Ka Amrit Mahotsav" on 5th December, 2020. A total of 80 Soil Health Cards were distributed to the farmers. Many (FLDs) and farmers' training were conducted and distributed agricultural inputs among ST and SC farmers.

Training programmes conducted by AICRP on STCR

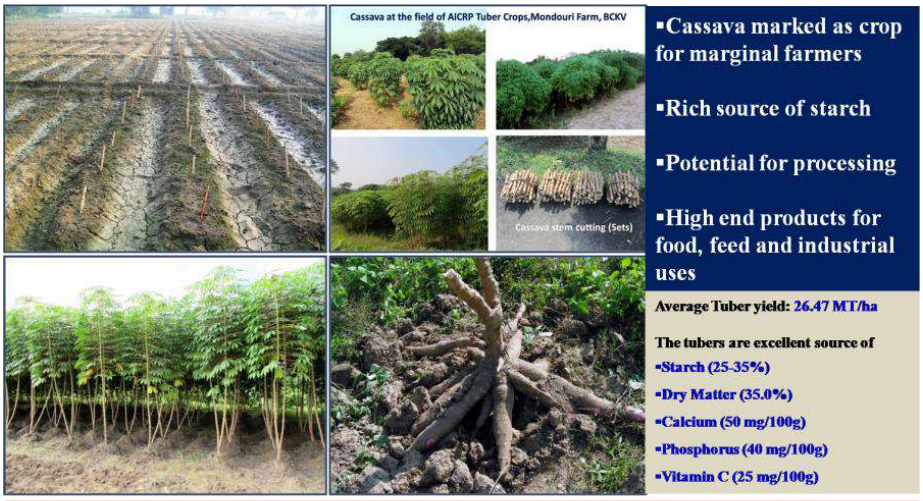
Development of TYE and field demonstration by AICRP on STCR

AICRP on Tuber Crops

The project was established at BCKV in 1976. The project has developed very well equipped laboratory for DNA Finger printing, bar coding centre and advanced diagnostic centre of plant virus and fungal disease. Acted as National Repository centre for Tuber crops.

Technologies for cassava starch and flour based Micro Food Processing for SHGs and entrepreneurs have been developed. Rapid detection of the viruses and other pathogens using molecular method has been standardized. Nutrient requirement of swamp taro @ 15 t of FYM and 120-60-90 kg/ha of N, P_2O_5 and K_2O has been standardized to produce optimum growth and yield of stolons in Assam, Tripura, West Bengal and Kerala. Eddoe taro entry TCbl 12-5(BCC-5, IC-361217) has been recommended for Centre Variety Release (CVRC) which is having high resistance to *Phytopthora* blight**.** Conducted many farmers' training programmes on cultivation, crop protection and value addition of tuber crops, particularly to the SC and women farmers.

Training programmes of AICRP on Tuber Crops **Eddoe taro**



AICRP on Vegetable Crops

The project was started in 1975. The project has developed well equipped laboratory. The project has important recommendations which include assessment of yield loss of ToLCV disease in tomato, standardization of IDM protocols for better management of bitter gourd virus disease; bacterial wilt of tomato;chilli diseases (PepLCV) and pest populations (Thrips, whitefly); bottle gourd disease (Gummy stem blight) and tomato diseases (ToLCV, Target leaf spot, Early Blight and Late Blight). Organized many training programmes to the tribal and schedule caste farmers and distributed critical inputs; delivered several lectures to the farmers and input dealers (DAESI); organized field days for selection of varieties through farmers' participatory mode; distributed improved varieties of different vegetable crops to the farmers in a regular manner and diagnosed important diseases and pests of vegetables crops and provided suitable control measures to the farmers by regular contact through phone call.

Field Days and Farmers' training programmes AICRP on Vegetable Crops

Standardization of IDM protocols of major diseases by AICRP on Vegetable Crops

AICRP on Weed Management

The project has been under operation at BCKV since 2016 with mandate of pattern of distribution of weed flora under different cropping systems in the region; effect of weed flora on health and performance of various field / horticultural crops; impact of herbicide molecules on soil physicochemical properties and development of suitable recommendations for weed management in crops and cropping systems.

Effective weed management in rice-rapeseed-greengram and rice-capsicum cropping systems has been standardized; weed management of rice, maize, sugarcane, cabbage and guava has been developed. Organized many farmers' training programmes.

Farmers' training programmes conducted by AICRP on Weed Management

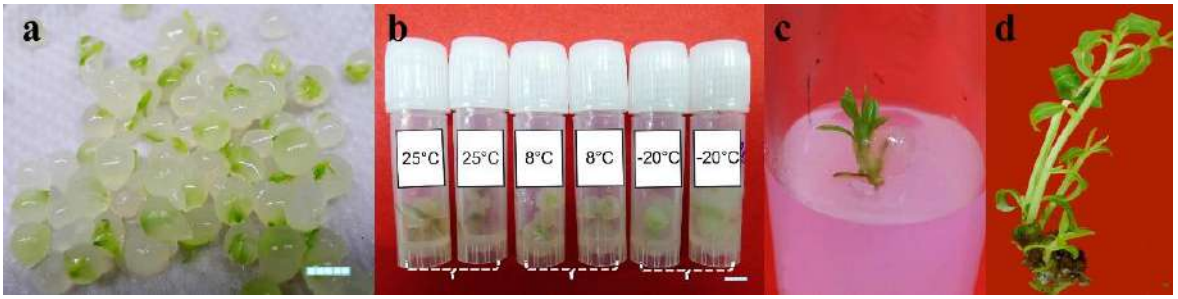
AICRP on Wheat and Barley Improvement

The project started functioning at BCKV in 1972-73. Weed management strategies include application of Metsulfuroan + Carfentrazone (4 g + 20 g a.i./ha) and Halauxifen + Florasulam + Carfentrazone (10.21 g + 20 g a.i./ha) for control of broad leaf weeds in wheat has been standardized. Application of 150%RDF + 15 t FYM/ha and 150% RDF + 15 t FYM/ha + two sprays as tank mix-Chlormequat chloride (Lihocin) @0.2% +tebuconazole (Folicur 430 SC) @0.1% of commercial product dose at first node and flag leaf was found effective against crop lodging and enhance crop yield to the tune of 16 to 31 percent in wheat. Some promising entries, for rainfed situation; for irrigated very late sown (1-7 Jan) crop; for rainfed timely sown crop; heat tolerant short duration lines, wheat blast resistant cultivars, were identified. Seed treatment with Carboxin 37.5% + Thiram 37.5%WS @ 2.5 g/kg seed along with two sprays of Propiconazole 25% EC @ 0.1 % at boot leaf stage and 20 days after first spray caused minimum disease incidence and severity of spot blotch. Spray of Tebuconazole 50% + Trifloxystrobin 25% WP @0.6 g/litres was found effective for controlling wheat blast like disease. Organized many farmers' training programme and conducted FLDs in 10 hectares area in different wheat growing districts of West Bengal.

Crop Research Unit

The unit was set up at BCKV in 1980. The project has established one Insect-Proof Net House. The research unit identified a perfect PCR-based codominant marker for the selection of plants/segregants with 50% low grain-arsenic accumulation in rice; Identified yield-enhancing *japonica* type SPIKE allele from an *aus* type rice landrace Bhutmuri and its allele specific codominant marker; developed l-*meta*-Topolin induced easy and efficient protocol for mass propagation of gerbera and efficient protocol for synthetic seed production, storage and post-storage germination in sarpagandha (*Rauwolfia serpentina*). A lentil variety, Bidhan Lentil 16 with yield potentiality 1552kg/ha is waiting for CVRC gazette notification after a final recommendation from SVRC and SSSC. A newly developed Lentil line (BL17) performed

well under small-seeded short duration category: Mean Yield 1392kg/ha compared to check variety WBL77 1288kg/ha.



(a) Sarpagangha synthetic seeds developed via Na-alginate encapsulation method, (b) storage of synthetic seeds in different temperature, (c) post-storage germination of synthetic seeds, (d) completely developed plantlet from synthetic seed

Crop strand (left) and comparison between BL16 and, WBL77 of lentil

AICRP on Mushroom (Voluntary Centre)

The AICRP on Mushroom was started at BCKV in 2015. The project has developed good laboratory facility for commercial spawn production. Identified two promising *Pleurotus* strains, PL-20-201 and Pl-20-205 Distributed 80 kg of spawn to farmers and conducted many training programmes for the entrepreneurs and farmers.

Two promising strains of *Pleurotus* sp.

Training conducted by AICRP on Mushroom

AICRP on Spices (Voluntary Centre)

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

popularize the spices cultivation in the adjoining area. Some promising lines of ginger, turmeric and nigella have been identified. Conducted many training programmes for the farmers.

ICAR-ICARDA-BCKV Collaborative Project

- Based on national yield trial (AICRP on MULLaRP), Farmers' field and multi-location on-farm trials, *Bidhan Lentil* 16 (LSS-19-54) with mean yield, 1552 kg/ha, is proposed for release which showed 9.8 % higher than that of WBL77 (1414kg/ha). It is a small seeded (2.1g) short duration (110days) heat tolerance line suitable for Gangetic plains and rice fallow areas of Eastern India.
- Lentil line (BL17) selected from ILL10802 performed well under small seeded short duration category: Mean Yield 1392kg/ha compared to check variety WBL77 1288kg/ha in 8 stations under AICRP-2020 rabi-IVT.
- Lentil line (BLH19) selected from ILL10893 performed well in AICRP-heat screening nursery: Yield 1274kg/ha compared to check, IPL316, 998kg/ha.
- ILL 10231, LL-56, IC 263285, IC 267667, ILL10802, NDL-11-1 identified as collar rot resistance genotypes after screening consecutive four years in Kalyani experimental field.

Technology Upscaling

- **Project I:** Enhancing lentil productivity under ricebased cropping system in West Bengal. OCPF-ICARDA (2012-13 to 2016-17). Area: 500 ha, farmers : 2167
- **Project II:** "Enhancing food and nutritional security and improved livelihood through intensification of Ricefallow system with pulsecrop in SouthAsia (Bangladesh,India and Nepal)", IFAD-ICARDA (2016-17 to 2020-2021) Area:1255 ha, farmers: 9118.
- **Project III:** "Enhancing pulses production for Food and Nutritional Security, Improved Livelihoods, and Sustainable Agriculture in West Bengal", Govt.of West Bengal–ICARDA. (2018-19 to 2020-21). Area: 500, farmers:2167
- **Project IV:**"Enhancing pulses productivity under rice based cropping system for improvement of livelihood and nutritional security in West Bengal" under Agriculture Marketing Department. Sufal Bangla-BCKV- Govt. of West Bengal Pulse Project(2020-21 to 2022-23). Area: 540 ha , farmers: 3482
- **Project V**: "Enhancing Pulse Production through improved technology and marketing of value added pulses product for improvement of livelihood and nutritional security", Directorate of Agriculture under ATMA Project.(2019-20 to 2020-21). Area : 70 ha, farmers : 537
- **Target districts (10):** Nadia, South 24 Parganas, North 24 Parganas, Bankura, Purulia, Murshidabad, East Midnapur, West Midnapur, Hooghly and Birbhum. Area : 2865 ha (21487 Bigha), farmers : 17471

Report of RKVY and RIDF Projects

In 2020-21, Survey, Selection and Mass production of Nodule Bacteria (SSMP) was strengthened under RKVY funded project entitled, "Establishment of Biofertilizer Production Unit". The aim of this project is to provide quality assured biofertilizers to the farming community either directly or through Government agencies in order to meet demand and generate trust of the users. Through this, increase in the yield of legumes and other crops is possible and it improves soil health. For augmenting production of major legumes, *Rhizobium* biofertilizers are considered, and biofertilizers for other crops, viz., Azotobacter, Azospirillum and Phosphate solubilizing bacteria are considered. Special emphasis is given for preparing liquid formulation (through an automated bottle washing-filling-capping machine) for longer shelf-life. The project is entirely infrastructure based for production of quality biofertilizers and is expected to cater all categories of farming community of the state. Crop Research Unit maintains more than 500 rice genotypes and 170 of them are mostly land race or land race-derived genotypes. They are in use for the discovery of new traits and development of new varieties. The newly-developed line B07 (IET28360) is very promising. An elite OsPAP10a allele of an aromatic landrace, 'Gobindabhog' showed both internal and external acid phosphatase secretion which improves phosphate deficiency tolerance and yield of rice.

Overall, the RKVY projects operating during 2020-21 and project-wise sanctioned amount are given in following table:

Sl. No.	Name of the Project	Sanctioned amount (in Crores)
1	Infrastructure support for Agricultural Mechanization of State Farm Machinery Training and testing Institute	5.0
2	Promotionof medicinal and aromatic plants through cultivation and entrepreneurship deelopment in West Bengal	0.63
3	Establishment of Bio-Fertilizer Production Unit	1.89
4	Management of Ground Water irrigation in Gangetic Alluvium of West Bengal, Gayeshpur	2.11
5.	Popularization of the diversified crops in Red & Lateritic Zones of West Bengal	0.43
6.	Developing a model for canopy management and training ..... Mango Orchard for yield and quality improvement and export promotion	0.2242
7.	Organic Farming based Integrated Farming System – promotion, production and marketing of organic produce through Self Help Groups (SHGs).	1.838
8.	Laboratory for testing quality of compost and organic manures at RRS, New Alluvial Zone, Chakdah;	1.3
9.	Laboratory for testing soil and water quality at RRS for Red and laterite Zone, Jhargram	1.3
10.	Laboratory for testing soil and water quality at College of Agriculture, Extended campus of B.C.K.V., Burdwan, West Bengal	1.3
11.	Solar Assisted Vapour Absorption Refrigeration System for on-Farm Cooling of Fruits and Vegetables	2.1334

The RIDF projects operating in the University are tabulated below along with

Sl. No.	Name of the Project	Project cost (Rs. In Lakh)
1	Promotion of Improved Technologies of Crop production for livelihood security and sustainable agriculture through strengthening of information	333.36
2	Strengthening of infrastructures and on farmers' participatory paddy and lentil seed production and demonstration in Birbhum district.	395.32
3	Establishment of three different processing unit for high quality fruit plants, enriched compost and integrated fish farming in the District of Nadia, West Bengal	148.01
4	Mobilizing local resources for Improving quality of rural people of Sundarban Delta	1024.23
5	Agricultural Development and livelihood security for farming community of Raghunathpur	661.21
6	Development of protocol for organic farming systems and it's popularization	416.86
7	Farmer service for soil testing	246.66
8	Establishment of testing training centre for fodd and water quality	853.08
9	Establishment of a centre for biological control	288.49
10	Transfer of Innovative fruit based Agro Forestry Model for crop production and poverty alleviation of farming community in Red and Laterite zone of West Bengal	821.53
11	Development of Farm and Tissue culture units	263.48
12	Infrastructural development using the renewable source of energy for agriculture and agro-based farms	523.77
13	Infrastructure development using the renewable sources of energy for agriculture at Jhargram	43.65
14	Infrastructure development using the renewable sources of energy for agriculture at Suri - II	43.65
15	Infrastructure development using the renewable sources of energy for agriculture at Raghunathpur - I	43.65
16	Infrastructure development using the renewable sources of energy for agriculture at Kakdwip	43.65

Regional Nuclear Agricultural Research Centre (RNARC)

Board of Radiation and Nuclear Science (BRNS), BARC(DAE), and BCKV signed a MoU to undertake R&D activities with the help of expertise from BARC, by way of establishing a **Regional Nuclear Agriculture Research Centre** at Bidhan Chandra Krishi Vishvavidyalaya, Mohanpur vide 35/15/07/2014-BRNS/0167 dated 29.04.2014. The Centre so developed will have a state-of-the-art laboratory to undertake various studies, to be chalked out under the guidance from experts from BARC on the use of radioisotopes and radiation technology in agriculture, biotechnology, and food preservation.

Initially, BRNS sanctioned Rs. 6,81,84,000 for four captioned projects for four years,including a one-time grant of Rs 3,46,00,000 for the 'Central Facility.'University provided a two-storied new building for hosting the Centre, especially equipment under the central facility. The government of West Bengal is kind enough to grant a sum of Rs, 32,00,000 for furnishing and modification of the indoor facilities suitable for the Centre. Finally, RNARC was inaugurated on the auspicious day of September 5, 2016, by PadmashreeDr. Sekhar Basu, Chairman, Atomic Energy Commission, Dr. D D Patra, Vice-Chancellor, BCKV, and Mr. P Mazumder, Advisor (Agriculture and allied sector) of the Chief Minister, West Bengal.

Salient Achievement Since Inception

I. Physical facility creation and utilization:

Dedicated laboratories with cutting-edge equipment, including GC5000,are in use not only by several university workers but also from neighboring institutes.

Table User's list of GC5000 at BCKV

Name of the Universities	No. of Exposures
BCKV	372
Bihar Agricultural University	8
C S K Himachal Pradesh Krishi Vishvavidyalaya	6
Indira Gandhi Krishi Vishwavidyalaya	12
Ramakrishna Mission Vivekananda University	19
UBKV	13
Universities from North-East India	342
University of Calcutta	13
University of Kalyani	55
Viswa Bharati	13
West Bengal University of Health Sciences	39
Total	**892**

II. Genetic improvement of crop plants, especially for the West Bengal region

One long-slender-grain rice variety with three P-deficiency tolerance genes is released (CVRC notification No.3-71l2019-SD.lV of 02.08.2019) and gaining fast popularity in our state. University produced and sold about 15-ton seeds this year.

Based on the multilocation yield trial of BARC-developed white-coated mustard line, TBM204 (TROMBAY BIDHAN MUSTARD-204), is released as variety (CVRC notification No S.O. 3220 (E) New Delhi September 5,2019).

A new mutant, TM-143 (TROMBAY BIDHAN MUSTARD-143), has been recommended by SVRC and SSSC, W.B., and waiting for CVRC notification.

Two newly developed semi-dwarf lines (BCKV-22-35 and BCKV-V-35 07) with drought tolerance QTLs (qDY1.1, qDY12.1) and two P-deficiency tolerance genes (PSToL1 and PAP10a) are given entry in early transplanting and early direct seeded categories of the *kharif* 2021.

One early flowering high yielding Moitree mutant (MM279) is given entry in the rice fallow situation under the AICRP-MULLaRP.

Semidwarf and high yielding, BCKV-V-35 07 with two drought tolerance QTLs given entry to early direct seeded categories in AICRP-2021

Putative mutant BG-1346501-200 Gy with high Charantin content

Early Flowering Moitree MM279 is given entry in AICRP-MMULLaRP under rice fallow

White coloured juncea mutant recommended for the release in Wb

Fig. Varieties and line developed during 2020-21

III. Enhancement of phyto-medicines

- Bitter gourd inbred line**,** BG-1346501, is identified as the highest charantin content among the 14 lines tested.
- Considering the fruit weight (69.40 g), quality characters (β carotene 0.412 mg, ascorbic acid 48.31 mg, and phenol content 6.46 mg/100 g) and high charantin content, the putative mutant, M4-501-100Gy-6 (mutants of the BG 1346501) emerged as the best.

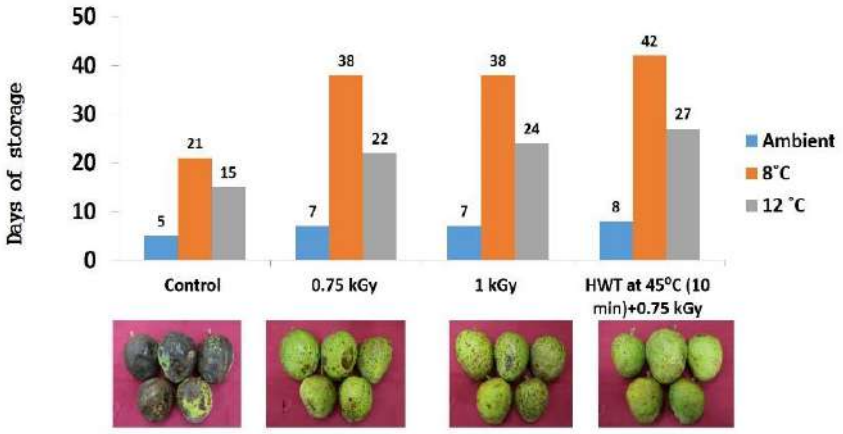
IV. Improvement of crop nutrition through radiotracer technique

- Polymer Sulphur Coated Urea (PSCU) performs better than Neem coated Urea (NCU) as reflected in Recovery Efficiency (REN) and Agronomic use efficiency (AEN) both in winter rice and summer rice in Kalyani and Jaguli Farm. However, it has no edge over NCU in Wheat and Potato, where less water is required.

From the N^{15} study, it reveals that 40.52% N is derived from applied fertilizer (%N) and Nitrogen Use Efficiency (NUE) of applied urea is only 29.44 for Rice grown in the wet season (*kharif*). Allele-specific SNP-based primers are designed and validated in several NIL lines with favorable PTF1 and PAP10a genes. *in vitro* regeneration protocol for mass multiplication of Bitter gourd is standardized.

V. Use of nuclear techniques for food preservation

'Himsagar' – one of the preferred commercial mango varieties of West Bengal on the one hand and highly perishable on the other can be stored at 8°C for 30 days with Hot Water Treatment (HWT) at 45°C for 10 minutes followed by irradiation at 0.75 kGy as against 2-3 days at room temperature without any treatment.



Outcome: 45°C hot water treatment (HWT) for 10 minutes, 0.75 kGy gamma irradiation and packed in perforated CFB box.

'Lakshmanbhog' - another commercial mango variety of West Bengal can be stored at 8°C for 45 days with HWT at 45°C for 10 minutes followed by irradiation at 0.75 kGy as against 6-7 days at room temperature without any treatment.

Onion flakes and powder prepared by convection drying and packed in polypropylene packet followed by the gamma irradiation (1kGy) could be stored at refrigerated temperature for more than six months.

VI. Validation of BARC-developed mutants in different agro-climatic zones of West Bengal

Among the ten mutant Green gram lines received from BARC, TMB 117 proved its superiority over all other tested cultivars by producing significantly ($p \leq 0.05$) higher seed yield (1689 kg ha^{-1}), which was followed by TMB 37 (1582 kg ha^{-1}) and TMB 153(1525 kg ha^{-1}).

BARC developed Black gram lines, T.U. 22 (matures in 87 days), and T.U. 24-10 (matures in 82 days) gave the higher yield than all the checks in all three agro-climatic zones of West Bengal.

Black gram lines, T.U. 22 and T.U. 24-10

VII. Seed multiplication of improved BARC varieties and distribution of varieties in parts of West Bengal.

Twenty-eight tonnes of T.L. groundnut seeds of TAG 24, TG51, and TG37A are produced during the summer season involving 186 trained farmers.

One ton of green gram variety seeds, TMB37, was produced and distributed among the farmers.

Improved Trichoderma strain is applied to cover more than 300ha of lentil cultivation for controlling seedling mortality and improving seedling vigor.

Nitrogen use efficiency experiment using N^{15}-tagged urea (left) and Promotion of growth and collar rot controlling ability of BARC developed efficient Trichoderma mutant (Right)

Centre for Advanced Agricultural Science and Technology (CAAST) on Conservation Agriculture

Objectives

To establish a conservation agriculture (CA) centre for empowering students, faculties, farmers, entrepreneurs and other stakeholders including policy makers with the following specific purposes:

- to formulate and implement innovative courses and skill development programs on CA;
- to demonstrate, fine-tune and innovate location specific technologies on CA;
- to collaborate with national and international leaders and also industries for up-gradation of knowledge; and
- to create an ICT-based information hub, think tank and competent human resources on CA for societal causes.

Highlights of the broad activities under component with emphasis on achievements during period

Experiments on fine-tuning conservation agriculture (CA) technologies [on 7 field crops + 3 horticultural crops] carried out and demonstrated to the farmers of the region in a University Farm dedicated to CA for the third year.

The research activities undertaken in the centre are mainly for new innovations and fine-tuning of the existing technology of conservation agricultural practices to make them fitted well with farmers' needs for promotion across the regions.

A number of ITKs on conservation agricultural practices are collected, collated and synthesized for validation and elucidating scientific principles involved and also for fine-tuning for making them perform better.

The research activities of the centre will give a new direction to the future research needs and act as a problem-solving centre for the country for promotion of conservation agricultural practices.

Eight students could complete their six-month international training in advanced laboratories abroad.

Lentil with rice residues retention **Zero till mustard**

Students are busy in laboratory work

International training of students

Directorate of Extension Education

The Directorate of Extension Education performs as the apex facilitating organ to take care of outreaching various clientele groups and other stake-holders across the South Bengal districts of the states through its various delivery units like the Krishi Vigyan Kendras (KVKs), Agricultural Technology Information Centre (ATIC) and the Farmers' Academy Convention of Centre (FACC). At present Viswavidyalaya has five Krishi Vigyan Kendras (KVKs) established in the district of Nadia, Howrah, Hooghly, Purba Medinipur and Jhargram (newly added into the University umbrella during 2020-21) with full fund support from the Indian Council of Agricultural Research (ICAR). It is also performing as the apex facilitating unit for overseeing and guides the activities of all the other eight KVKs, located in the south Bengal districts of West Bengal.

Agricultural Technology Information Centre (ATIC)

Various services extended through ATIC, ranges from offering the benefit of diagnostic services, sale of technological inputs among farmers, supply / sale of farm publications and organizing farmers' visit to various units asn per interests of the farmers etc. During 2020-21 total 4213 visitors have recorded at ATIC.

Farmers Academy and Convention Centre (FACC)

The Farmers' Academy and Convention Centre (FACC) has been becoming a centre of excellence across Eastern India in the domain of agricultural education and extension through capacity building of the farmers and stakeholders. On that pandemic situation the Farmers' Academy and Convention Centre FACC has been successfully moved to virtual classrooms and arranged multi-disciplinary online classes on agricultural education and extension through capacity building of the farmers and stakeholders. During the reporting period FACC facilitated 7 programmes of different agenicies namely MANAGE, SATSA, Dept. Agriculture, Govt. of West Bengal, ICAR etc. with 760 participants of 9110 trainee days. The revenue of Rs. 16,95,683/- has been generated towards room rent during 2020-21.

Publication of Directorate of Extension

The unit performs various activities to develop, document and effective dissemination of desired information to the clientele by way of maintaining close coordination with the centrally existing Information, Press and Publicity Cell of the University.

Capacity Building Programmes

The Extension Education Directorate has conducted various types of Capacity Building Programmes through the KVK and Farmer's Training Centre (FACC) during 2020-21. Among different training programmes majority of the programmes were conducted for the farmers and farm women (68.74%) followed by rural youth (13.00%) and extension personnel (18.25%).

Category wise participants trained during 2020-21 through the Extension Directorate

Clients group	HQ & FACC	Nadia KVK	Hooghly KVK	Howrah KVK	Purba Medinipur KVK	Jhargram KVK	Total
Practicing Farmers	-	3085	3777	2525	2688	894	**12969**
Rural Youths	-	1034	933	325	130	31	**2453**
Extension Functionaries	760	1191	360	1846	11	35	**3443**
Total	**760**	**5310**	**5070**	**4696**	**2829**	**960**	**18,865**

KVK 1: Nadia Krishi Vigyan Kendra

Nadia, a district of West Bengal is situated in its eastern side with its headquarters in Krishnanagar. Geographically, the district lies at 23°47'N latitude, 88°56'E longitude, in the new alluvial Gangetic plains of West Bengal.

Demonstration units at Nadia KVK

Vermicompost unit

Azolla production unit

IFS unit

Multi-tier crop model

Roof top water harvesting structure

Poly house for high value vegetable production

Mushroom production unit

Vertical Farming unit

Seedling hardening unit

KVK 2: Hooghly Krishi Vigyan Kendra

Hooghly KVK situated at its district headquarter Chinsurah (Chuchura). The geography location of the District is Latitude: 22 55' N Latitude: 88 24' E, under New alluvial zone of southern Bengal.



Demonstration units at Hooghly KVK



Low cost onion storage structure | **Poly house** | **Shed nethouse**



Net house | **Vermicompost unit** | **IFS unit**

KVK 3: Howrah Krishi Vigyan Kendra

KVK is situated at Jagatballavpur village under Jagatballavpur block within Howrah sadar sub-division and falls under the new alluvial and old alluvial agro-climatic zone of West Bengal. Jagatballavpur is located at 22°40′44″N 88°07′02″E.


Demonstration units of Howrah KVK

Vermicompost unit

Goatary unit

Green house

Mushroom Spawn Production Unit

Poultry & Duckary Unit

Mushroom Unit

Fruit sapling production unit

Fishery unit

Azolla unit

Seedling production unit

Vertical garden unit

Crop cafeteria

KVK 4: Purba Mednipur Krishi Vigyan Kendra

The KVK is located at Mulakhop, Dayaldasi, Nandakumar, Purba Medinipur (22.1794° N, 87.8708° E) under the New Alluvial and Coastal Saline Zone of West Bengal.

Demonstration units at Purba Medinipur KVK



Model pond based IFS unit

Crop cafeteria

Medicinal plant block

Low-cost poly house and poly tunnel

KVK 5 : Jhargram Krishi Vigyan Kendra

The KVK Jhargram is located at 22.45° N 86.98° Eat Vill. - Kadamkanan, dist : Jhargram, West Bengal – 721507 under Red and Lateritic Zone of West Bengal. The KVK has been adopted by the university in the year 2021.



Technological intervention of KVKs through different approaches during 2020-21

Sl. No.	Activities	Magnitude
1.	On Farm Trial	39 No.
2.	Front Line Demonstration	445.5 ha/3351 participants
3.	Other extension activities *(Field day, advisory service, diagnostic visits, kisan mela, scientific visit to farmers field etc.)*	3266 Nos./32,599 participants
4.	Technological input production at KVK farm	468.4 q
5.	Planting material produced	1,98,154 No.
6.	No. of soil health card issued	446 No.
7.	Media coverage	96 No.

Training of farmers

FLD on downy mildew disease management

Training to ATMA functionaries

Training on fruit fly management

OFT on Leaf curl disease management of capsicum

Media cover

Training on open field floriculture

Training on mushroom cultivation

Training on nursery management

FLD improved variety of tuberose

Demonstration on seed production of potato

Nutrition garden programme with school children

OFT on evaluation of high density planting system of banana

Training on master farmer development programme

OFT on drum seeder

Women empowerment: training on jute handicraft

Demonstration plot under CFLD

Training on Bee Keeping

Farmers- Scientist interaction

Training on farm women for mushroom

Parthenium awareness

Impact of technology intervention

Sl. No.	Activities	Magnitude (Large scale adaptation)
1.	Protection of farmers' varieties through PPV and FRA	71 reported/13 registered
2.	Promotion of improved high yielding paddy variety Prateeksha (IET-15191)	3850 ha
3.	Promotion of nematode resistant tuberose variety Arka Prajjwal	6940 ha
4.	Promotion of protected cultivation (Flower, high value crops)	213 units (1000/500 sq. m)
5.	Plug tray and off season vegetable seedling raising	253 ha.
6.	Banana bunch cover	22 ha.
7.	Promotion of tissue culture plant material	465 ha.
8.	Promotion of cucurbits crops in tralis	3217 ha.
9.	Promotion of guava bending technology for increasing yield	475 ha.
10.	Low cost onion storage structure	15 unit
11.	Onion seed production	533 ha.
12.	Ethrel application in cucumber for increasing production	1254 ha.
13.	Improved technology of potato late blight management	7564 ha.
14.	Additional income generation through mushroom farming	350 unit
15.	Improved agro-techniques of elephant foot yam (Var. Bidhan Kusum)	47.5 ha.
16.	Protective measures against blast of summer rice	176.6 ha.
17.	Improved packages of practice of Ground Nut (Var. TG51)	225.5 ha.
18.	Cultivation of swarna sub-1 under waterlogged condition	145.5 ha.
19.	Protective measures against hollow heart of cauliflower	54.5 ha.
20.	Application of gibberellic acid to increase yield in cucurbits	52.0 ha.
21.	Backyard RIR chicken rearing as a part of village livelihood	856.0 unit
22.	Improved packages of practice of sesame (var. Rama)	110.0 ha

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 course in collaboration with SAMETI and MANAGE. 5 units under the directorate are implementing the course as Nodal Training Institute *viz*. FACC, Hooghly KVK, Nadia KVK, Howrah KVK and Purba Medinipur KVK.

The detail of the DAESI courses during last 5 yrs

Name of the NTI	No of batch completed	Ongoing batch	Total participants	Resource generation (In Lakh)
FACC	4	2	240	48.00
Hooghly KVK	7	2	360	72.00
Nadia KVK	4	2	240	48.00
Howrah KVK	3	2	200	40.00
Purba Medinipur KVK	-	2	80	16.00
Total	**18**	**10**	**1120**	**224.00**

DIRECTORATE OF FARMS

Presently there are 12 numbers of farms in different agro-climatic zones under this Directorate having total area about 1217 acre. The farms are running with a vision to support the teaching, research and production of quality seed of different crops having different classes (Breeder, foundation and certified) with newly introduced variety projecting SRR at least 50% within coming 3 years.

Production and Revenue

Year	Production of seed in Quintals							Sapling production	Revenue generation (Rs.)
	Paddy	Pulse	Oilseed	Potato	Jute	Elephant foot yam	Turmeric		
2020-21	3050	141	10	Nil	Nil	40	10	12000	1,02,54,858

Paddy seed production at Mondouri

Paddy seed production at RRSS, Chakdaha

Paddy seed production at D- block farm

Quality seed production in AB-DSF, Kalyani

Paddy seed production at AB-Block Farm, BCKV

Facility development

- Farm mechanisation plays a critical role in increasing agricultural productivity. Mechanisation has been well received in India as one of the important elements of modernization of agriculture, enhancing the agricultural productivity and consequently rural prosperity. In this regard, various initiatives have been taken by the Central Government as well as State Government. This year university has completed farm mechanisation project under RKVY-RAFTAAR- where different farm machineries for different farms were purchased for production of quality seed to be distributed among the farmers. (Project cost Rs.98lakh)


Mechanisation under RKVY Project

- Sanitary complex, having an objective of providing toilet facility that enhances privacy and dignity. Every year a large no. of farmers especially women farmers, visitors, students of different institution visit the farms of BCKV as their part of educational tour and for collecting the seeds of different crops. Considering this we have completed **8** sanitary complexes for different farms of BCKV under Nirmal Bangla Project of West Bengal Government (Project CostRs.16 lakh).

Sanitary complex development 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. So market demand is always high for fish item. If we consider the global demand also, the total requirement becomes very high. The mainsource of fish is from the 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 7.67 acre of uncultivated low land in farms to water bodies for fish cultivation through PPP model which in turn will act as a reservoir of water for agricultural irrigational purposes.

Water body development in farm of BCKV

- Fruit trees contribute to the environment by providing oxygen, improving air quality, climate amelioration, conserving water, preserving soil, and supporting revenue generation by producing fruits. Thinking of that we have developed 10 acre of cashewnut, mango, mosambi (sweet lime), arecanut, coconut, litchi plantation in different farms of BCKV in this year.

New orchard development at Mondouri farm, BCKV

- To transfer the innovative technology to the farmers we have conducted 6 numbers of hands on training to the Farmers in different districts of West Bengal , 3 Field Day and attended 3 Krishi Mela (including Mati Utsav conducted by Govt. of West Bengal) with stall having different farm produce, seed, displays, agriculture literatures etc.
- Unlike fossil fuels, solar energy won't run out any time soon. It is eco-friendly and restrict carbon emission due to fuel burning. Being renewable source of energy, it is not limited. The most commonly used solar technologies for homes, institutions and business area are solar photovoltaics for electricity. As a renewable energy source, the only limitation of solar power is our ability to turn it into electricity in an efficient and cost-effective way. Keeping this in mind we havecompleted solar light and solar irrigation system in different farms under RIDF project.
- Government of West Bengal has sanctioned Rs. 6.84 crore under RKVY Project for infrastructure development of five farms. Work of Infrastructure development in one farm have started.

Installation of solar light in BCKV farm

Construction of farm-Road under RKVY project

Infrastructure development under RKVY project in C-Unit farm, BCKV

CENTRAL LIBRARY

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

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

Different sections

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

- Circulation
- Reference and reading
- Career corner
- Acquisition and processing
- Newspaper zone
- CABI access zone
- Internet / CeRA 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

Central Library

Learning Resources

The Central library has a rich collection of **78,200 +** Books, **1191** Journals Titles, 6050 Loose Journals and Periodicals and **25,043** Volumes of Bound Journals, **38** Popular Magazine, **5711** Ph.D. and M. Sc. Thesis, more than **4320** Reports, 826 Non Book Materials and many other reference materials.

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

e-Books and e-Journals @ CeRA

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

Facilities and services

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

- Reference and referral
- Computerized circulation
- Current awareness
- Book bank
- WiFi facilities
- Current and bound journals (Print)
- Thesis and dissertation
- Photocopy
- Audio-visual
- Internet surfing
- Inter-library Loan
- Database search
- Online electronic books and journals.
- Document delivery service under CeRA

Library extension activities

The Central Library does not remain confined to the traditional library services only, but takes the privilege of providing library extension services in various ways for the benefit of the user community. Some of the defining activities of the library include - library orientation programmes and faculty interaction programmes.

Achievement

Central Library received Best Usage Award for Eastern Region from ICAR for the utilization of CeRA resources by its patrons.

National Service Scheme

Due to Covid situation and absence of the students in the campus during this period all the NSS Programmes were conducted virtually.

Special programmes organised (Virtual Mode)

- Quiz Programme 'Awareness on Covid-19'
- International Quiz Conteston 'Environment'
- Intra University article writing and video making competition on-
  (i) Covid-19 and (ii) Amfaan Strom
- Online quiz event 'Qurious', and International workshop on 'Role of Youth for Sustainable Food Production through Livestock and Health Management'
- Organised 'Infiesta' intra university article writing competition
- Voluteers took training to fight Covid-19 via DIKSHA,Govt of India
- Volunteers participated in the 'Spitting Kills'Campaignby NSS West Bengal
- Celebrated International Yoga Dayand organised a webinar on the topic 'Benefits of Yoga'
- Organised International Webinaron 'Environment in 2020:Vision and Mission'
- Organised a cultural get together via online platform 'Tobu Mone Rekho' Porbo-2, (Kobi Pronam), on the occasion of the death anniversary of Kabiguru Rabindranath Tagore.
- Organised Online Quiz Competitionfor the school students on 'Agriculture' on Education Day.
- Webinar on the awareness of 'Aids'in collaboration with WBSAP & CS
- Organised Fit India Cyclothon, Marathon and Walkathon for the promotion of Fit India Campaign.

Achievementsof NSS- BCKV and Awards

- Awarded as the best Red Ribbon Club in India from West Bengal State by National Aids Control Organisation, MH and FW, Govt. of India in 2019 at New Delhi.
- Mayukh Bhattacharyya, NSS Volunteer, received Certificate of Distinction on Video Making Competition in National Yuva Contest, 2020 by NSS, Uttar Pradesh, India.
- Parijat Bhattacharya and Souradeep Sarkar, NSS Volunteers, BCKV are awarded as District and State Level Champion and also as regional level Runners Upin quiz competition organized by W and CS, 2020 andMH and FW, Govt of India.
- Mayukh Bhattacharyya, NSS volunteer, BCKVsecureddistrict level 3rdpositionin poster competition on 'Catch the Rain When it Falls,Where it Falls'by NYKSand Ministry of Youth Affairs and Sports,Govt of India in 2020.
- Mayukh Bhattacharyya and Parijat Bhattacharya,NSS Volunteers,BCKV secured 4thand 6thposition, respectively in short film making competition by NACO& Ministry of Health & Family Welfare, Govt. of India on the topic of Blood Donation and Aids Awareness Promotion in 2020.
- NSS,BCKV won Certificate of Appreciationfrom Ministry of Youth Affairs and Sports for successfully conducting Fit India Cyclothon in promotion of Fit India Campaignin 2020.

Health Centre

Bidhan Chandra Krishi Viswavidyalaya, Health Centre, a small OPD unit, unique of its own along with its staffs,is serving the students and employees(including their dependents) of this University throughout the year.

In the Health Centre, free medical advices, free investigations and physiotherapy are provided to the students of this University, along with required medicines. Staff and their family members may avail the facilities of free medical advice, investigations with nominal charges along with emergency medicine only.

Available facilities

- Consultancy /expert opinion
- Supply of available medicines to the students
- Dressing of cuts, wounds, burns etc. are done in properly sterilized manner
- Keeping the patients under observation
- Digital X-ray with reports
- Electro- cardiogram (ECG) with reports
- Baseline and advanced pathological – cum-biochemical tests like: lipid profile, total blood count, uric acid and other hormonal assays
- Physio - rehab unit
- 24 X 7 services of university ambulance

Activities

The students who mostly reside in the hostel are served with First-Aid and various other medical necessities with the available resources of this centre. There has been consistent improvement in the overall modus operandi of this department. The patient and the department interface has been quite apprehensive. Our vigorous effort for development for the centre was very fruitful as we were able to treat out patients with more advanced medical interventions. On an average 350 students are treated and advised in a week from this centre. Apart from that the students also get benefited by the expert opinion beyond office hour.

A number of modern and advanced diagnostic equipments were purchased for the Health Centre namely “Auto Analyser”, “Digitalised Ecg Machine” and “Digital X-Ray Machine” from student amenities grant of ICAR which are now functioning to meet the necessities of the patient. “Hematological Auto Analyser” and “Ultra Sonography Machine” was purchased to boost up the diagnostic facilities of this unit.

Glimpses of medical activities at the University 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

Year	Name of the Faculty	ICAR	CAU/SAU	Central Govt.	State Govt.	Bank	Pvt./Others
2020-21	1. Faculty of Agriculture	0	23	24	90	9	42
	2. Faculty of Horticulture	0	5	6	25	12	11
	3. Faculty of Ag. Engineering	0	0	0	5	1	15
Total		**0**	**28**	**30**	**120**	**22**	**65**

List of M.Sc. Thesis Submitted at BCKV 2020

Faculty of Agriculture

Sl. No.	Name of the student	Thesis title	Name of the chairman
Department of Agronomy			
1.	Ahmad Abbas Ahmadi	Performance of wheat as influenced by weed management practices in new alluvial zone of West Bengal	Prof. B.C. Patra
2.	Akash Roy	Effect of different organic based inputs on growth, yield and economics of *kharif* rice (*Oryza sativa* L.)	Prof. M. Pramanik
3.	Md. Aminur Rahaman Ansari	Effect on foliar nutrition of boron and molybdenum on growth and yield of chickpea under new alluvial zone of West Bengal	Dr. Md. Hedayetullah
4.	Arijit Karmakar	Crop growth and yield of rice as influenced by integrated nutrient management in lower Gangetic plains	Prof. S.B. Goswami
5.	Arindam Majee	Role of zinc nutrition on growth and productivity of lathyrus (*Lathyrus sativus* L.) in lower Gangetic plains of West Bengal	Dr. S. Maji
6.	Arup Sarkar	Effect of foliar nutrition on growth and yield of hybrid mustard (*Brassica juncea* L.)	Dr. K. Jana
7.	Bhaskar Rajbanshi	Performance of maize genotypes under varying planting density and nutrient levels in new alluvial zone of West Bengal	Dr. S. Biswas
8.	Boddu Lokesh	Studies on organic source of nitrogen on green forage yield and quality of oat (*Avena sativa.* L)	Prof. C. K. Kundu
9.	Chow Milingta Longphoi	Optimization of sowing date and zinc fertilization for hybrid maize in new alluvial zone of West Bengal	Dr. K. Brahmachari
10.	Debangshu Haldar	Effect of bio-fertilizer and foliar application of zinc on growth and yield of summer rice	Dr. M. Roy
11.	Debarati Seal	Evaluation of bio-efficacy of herbicides in transplanted winter rice	Prof. B. C. Patra
12.	Ebenezer Kwami	Effect of integrated nutrient management on growth and yield of *boro* rice (*Oryza sativa* l.) in new alluvial zone of West Bengal, India.	Prof. D. Dutta
13.	Gedela Bhagya Sri	Effect of different organic sources of nitrogen on dual purpose ricebean [*Vigna umbellata (Thumb.) Ohwi and Ohashi]*	Prof. C. K. Kundu

Sl. No.	Name of the student	Thesis title	Name of the chairman
14.	Kunal Middya	Evaluation of field pea(P*isum sativum* l.) genotypes under varying seed rates at new alluvial zone of West Bengal	Prof. R. Nath
15.	Madhurima Dey	Effect of weed control practices on weed flora, growth and yield of direct seeded *kharif* rice (*Oryza sativa* L.) in new alluvial zone of West Bengal	Prof. D. Dutta
16.	Megha Mondal	Effect of bio-nano P and K on performance of black gram crop	Prof. K. Sengupta
17.	Osman Ali	Performance of sesame (*Sesamum indicum* L.) varieties under different plant establishment method during summer season	Prof. S. K. Gunri
18.	Preetam Biswas	Effect of organic and inorganic nutrient sources on growth and yield of scented rice (cv. Harinakhuri) in lower normal plains of West Bengal	Prof. M. Ghosh
19.	Pritha Kundu	Effect of sowing date, spacing and variety on phenology, growth and yield of summer mungbean	Prof. M. Ghosh
20.	Rahul Saikh	Effect of foliar zinc application at different growth stages on growth and yield of rice	Dr. K. Murmu
21.	Rakhal Das	Effect of different pre and post emergence herbicides in rabi maize	Dr. S. Sarkar
22.	Saheb Bhadra	Effect of integrated weed management practices on growth and fibre yield of *Olitorious* jute (*Corchorusolitorius*) under new alluvial zone	Dr. B. Mondal
23.	Sharmila Tudu	Effect of herbicides on weed flora, growth and yield of gobindabhog rice during *kharif* season	Dr. S. Banerjee
24.	Shubhamay Dey	Irrigation management of elephant foot yam based intercropping system in lower indo-Gangetic plains	Prof. S.B. Goswami
25.	Sourav Chandra Chand	Bio-efficacy and phytotoxicing evaluation of imazethapyr 35% + imazemox 35% wg for controlling weeds in groundnut	Prof. S. K. Mukhopadhyay
26.	Suman Samui	Growth, yield and uptake of NPKin kharif rice (O*ryza sativa* L.) under integrated use of municipal compost and chemical fertilizer in new alluvial zone of West Bengal	Prof. S. Pal

Sl. No.	Name of the student	Thesis title	Name of the chairman
27.	Susmita Moi	Effect of mulching and nutrient management on growth, yield and soil fertility status in rabi maize crop	Prof. M. Pramanick
28.	Tania Biswas	Effect of seaweed extract (*sagarika*) on performance of summer mung bean	Prof. K. Sengupta
29.	Udayan Rudra Bhowmick	Influence of phosphorus and zinc nutrition andbiofertilizers on growth and productivity of lentil (*Lens culinaris* Medik.)	Dr. S. Mondal
30.	Doppalapudi Vijaya Rani	Sedges and broad leaved weed management in direct seeded rice by herbicides and their residual effect on lentil crop	Prof. P. Bandopadhyay
Department of Agricultural Chemistry and Soil Science			
1.	Supratim Das	Management of fly ash dumping sites for agricultural use	Prof. N. Saha
2.	Aditi Roy	Arbuscular mycorrhizal fungal spore abundance and diversity under conservation practices in lower the Gangetic plains of West Bengal	Prof. N. Saha
3.	Anjali Priya	Evaluation of soil biological health under organic cultivation of cashew	Dr. T. Biswas
4.	Anwesha Samanta	Studies on the interaction effect between zinc and iron in low land rice	Prof. G. C. Hazra
5.	Avirup Guha	Boron availability in soils under conservation agriculture	Dr. D. Sarkar
6.	Chandan Saha	Soil test based fertilizer formulation for cabbage under drip irrigation system in an inceptisol	Prof. S. K. Patra
7.	Debashis Dutta	Development of nutrient management protocol for broccoli under conservation agricultural practices	Prof. B. Mandal
8.	Kaila Tara Meghana	Studies on dynamics of some cationic micronutrients in rice soil under nutrient and water management	Prof. P. K. Patra
9.	Mainul Hasan	Yield of alfalfa and uptake of phosphorus as affected by soil acidity	Prof. A. Debnath
10.	Ratul Roy	Study of nitrogen release and crop response as affected by different coated ureas under rice-wheat cropping system	Prof. P. K. Mani
11.	Rupom Barua	Depthwise distribution of different forms of potassium under three different rice based cropping system	Dr. S. Murmu
12.	Saikat Ranjan Das	Studies on profile characterization of old alluvial zone of West Bengal	Prof. S.K. Ghosh

Sl. No.	Name of the student	Thesis title	Name of the chairman
13.	Sayan Choudhury	Evaluation of multinutrient extractant for determination of available phosphorus in soils of inceptisols	Prof. K. Bhattacharyya
14.	Sk Md Asif	Inorganic-organic fertilization on yield and nutrients uptake by rice and soil fertility after six cycles of different rice based cropping systems	Prof. S. Saha
15.	Souptik Sarkar	Irrigation and nutrient management on cabbage in a sandy loam soil	Prof. S. K. Patra
16.	Souvik Dey	Depthwise distribution of available sulphur in soil under conservation agriculture	Prof. A. C. Das
17.	Subhadip Saha	Phosphorus thresholds for assessing environmental risk in soils of West Bengal	Prof. S. K.Pal
18.	Subhechhya Ali Parvin	Effect of biofertilizer and vermicompost on microbial proliferation, nutrient mobilization and yield of beet	Prof. S. C. Kole
19.	Subrata Roy	Studies on soil aggregate stability and aggregate-associated organic carbon under long-term fertility experiment	Mr. A. Dey
20.	Surajit Sarkar	Distribution of forms of phosphorus in some acid soils of West Bengal	Dr. K. Batabyal
21.	Titli Biswas	Effect of vermicompost, mulching and nutrients on soil moisture dynamics and yield of cabbage	Prof. P. K. Bandyopadhyay
22.	Trushna Swain	Evaluation of suitability of multinutrient extractant for estimating available potassium in soil for nutrition of wheat	Miss S. Mondal
23.	Urmi Saha	Effect of coated urea on nitrogen transformation in rice based cropping system	Prof. H. Saha
24.	Md Wahiduzzaman	Studies on dynamics of secondary nutrients in rice soil under nutrient and water management	Prof. H. Saha
Department of Agricultural Biotechnology			
1.	Prakash Kisku	Regeneration and genetic stability in rouwolfia shoot tips cryopreserved through encapsulation dehylration method	Dr. Md. Nasim Ali
2.	Chinmoy Mondal	En masse micropropagation of *Commelina benghalensis* L. through *in vitro* culture of nodal explants	Prof. N. Mandal
3.	Ibtesam Anjum	Agro-physiological traits and microsatellite based genetic variation in bread wheat (*Triticum aestivum* L.) under terminal heat stress	Dr. Md. Nasim Ali

Sl. No.	Name of the student	Thesis title	Name of the chairman
4.	Snigdha Das	Screening of bread wheat (*Triticum aestivum* L.) Using gene-specific sts markers associated with thousand kernel weight	Dr. Md. Nasim Ali
Department of Agricultural Entomology			
1.	Abhinandan Sahoo	Study on impact of conservation agriculture practices on soil micro arthropods population in rice-black gram-mustard cropping sequence	Dr. P. Debnath
2.	Amir Sohel	Bio-efficacy of different insecticides against diamondback moth [*Plutella xylostella* (L.)] on cabbage	Prof. A. K. Sahoo
3.	Amit Layek	Foraging behaviour of A*pis mellifera* l.	Prof. S. Jha
4.	Anirban das	Taxonomic studies of some archaeococcids (*Coccoidea hemiptera)* occurring in West Bengal	Prof. S. K. Ghosh
5.	ArkaManna	Population dynamics of insect pests of brinjal with special reference to brinjal shoot and fruit borer *Leucinodes orbonalis* L. and its management with some insecticides	Prof. G. Chakraborty
6.	Anusha M	Studies on pest complex and their natural enemies on cabbage, *Brassica oleracea* var. *capitata* L. in the Gangetic plains of West Bengal	Prof. A. K. Maity
7.	Debasmita Dutta	Studies on arthropod fauna associated with *Pongamia pinnata*, an important medicinal and insecticidal plant	Prof. B. K. Das
8.	Gyaneswari Bindhani	Incidence and damage of mustard pests as influenced by the companion crop fenugreek	Prof. S. Chakravorty
9.	Sk. Hafijur Rahaman	Seasonal incidence of lady's finger sucking pest and their sustainable management by some insecticide in combination with biopesticide	Prof. S. K. Ghosh
10.	Kriti Singh	Identification and distribution of aphids from lower Gangetic plain region of West Bengal, India	Dr. K. Roy
11.	Palle Pravallika	Investigation on effect of tritrophic interaction between plant, root-knot nematode and fluazaindolizine under the prevailing phenological regime	Prof. A. K. Mukhopadhyay
12.	Paramita Das	Study the mite fauna associated with solanaceous vegetables with special reference to population fluctuation and management of yellow mite, *Polyphagotarsonamus latus* (Bank) in chilli	Dr. S. C. Bala

Sl. No.	Name of the student	Thesis title	Name of the chairman
13.	Pousabh Das	Efficacy study of some insecticides of chemical origin against major insect pest of maize	Prof. A. Samanta
14.	Pranabesh Nandi	Seasonal occurrence and management of sucking pests of chilli in the Gangetic basin of West Bengal	Dr. A. Sarkar
15.	Prasakha Dutta	Investigation on the biology of fall army worm (*Spodoptera fruigiperda*) and efficacy of chloranthraniliprole 18.5% sc against fall army worm on maize	Prof. A. Pramanik
16.	Pritha Ray	Study on the impact of etoxazole on red spider mite, *Tetramyclus usticaekoch* infesting brinjal crops	Prof. K. Karmakar
17.	Rajeshwaran. B	Studies on molecular characterization and biology of grey pineapple mealy bug *Dysnicoccusneo brevipes* beasdsley (hemtptera :pseudococcidae) on banana	Prof. A. K. Sahoo
18.	Rayanta Kumar Lala	Reaction of some chickpea germplasm lines against root knot nematode, *Meloidogyne incognita* (Kofoid and White) chitwood and its management under field condition	Dr. S. Mandal(Ghosh)
19.	Sandipan Kayal	An investigation to find out the sources of infestation of rice sheath mite, *Steneotarsonemus spinki* Smiley (acari: tarsonemidae)	Prof. K. Karmakar
20.	Sayani Bera	Seasonal incidence as well as estimation of yield loss caused by major pests of grasspea (*Lathyrus sativus* L.) in lower Gangetic plains of West Bengal	Dr. A. Banerjee
21.	Sebabrata Das	Impact of chemical intervention on the arthropods' behavious in cucurbitaccous and solanaceous ecosystems	Prof. A. K. Mukhopadhyay
22.	Soumyajit Tripathi	Incidence of insects pests in different varieties of green gram [*Vigna radiata* L.) Wilczek] in relation to some abiotic factors *vis-a-vis* their novel management	Prof. G. Chakraborty
23.	Souvik Dutta	Evaluation of nematicides against root-knot nematode, *Meloidogyne incognita* (Kofoid and White) Chitwood in cucumber, *Cucumis sativus* L.	Dr. K. Roy

Sl. No.	Name of the student	Thesis title	Name of the chairman
24.	Suprava Malik	Evaluation of integrated management practices against insect pest complexes of green gram during kharif season in Gangetic plains of West Bengal	Prof. A. Samanta
25.	Tamoghno Majumder	Efficacy of newer insecticides and botanicals against gram pod borer, *Helicoverpa armigera* (Hubner) (Noctuidae : Lepidoptera) infesting chickpea	Prof. A. Pramanik
Department of Seed Science and Technology			
1.	Anish Choudhury	Genetic variability and qualitative assessment of chickpea genotype in relation to seed morphology	Prof. P. Chakraborti
2.	Sudipta Biswas	Response of china aster genotypes towards foliar application of GA_3	Dr. S. K. Bordolui
3.	Washim Biswas	Application of seed priming for enhancement of seed vigour of snake gourd (*Trichosanthes cucumerina* L.)	Prof. P. Chakraborti
Department of Agricultural Statistics			
1.	Ayan Dey	Multivariate analysis of variance in rbd set up in agriculture	Prof. A. Majumder
2.	Lokeshwari M	A comparative time series analysis of trends and forecasting of cost and production behaviour of major crops in Tamil Nadu with major producing states in India	Prof. P. K. Sahu
3.	Pavan Kumar Thota	Wavelet-arima modelling of agro meteorological time series data	Prof.(Mrs.) B. Bhattacharya
4.	Md M. Hasan Middya	Detection and impact of outlier(s) in factorial experiments	Prof. A. Majumder
Department of Agricultural Extension			
1.	Ananta Mandal	Analysis of Indian agricultural apps for better utilization by the farming community	Prof. D. Basu
2.	Arundhati Basu	Content analysis of agricultural TV programs broadcast by DD kisan and krishi darshan - DD Bangla	Prof. D. Basu
3.	Ashraful Hoque	Prospect and problems of fishery in minakhan block of North 24 Parganas district	Prof. S. Mondal
4.	Banoth Tejasri	Occupational perception and preferences of post-graduate students of BCKV and ANGRAU towards agriculture as a profession	Prof. T. K. Mandal
5.	Debraj Roy	The productivity, income and livelihood of operating poultry and rice farmers : the structural and functional interpretation	Prof. S. K. Acharjee

Sl. No.	Name of the student	Thesis title	Name of the chairman
6.	Dhrubajyoti Barman	Role performance, expectations and achievement motivation of research scholars of BCKV in the context of satisfaction and organizational climate : the status and interpretation	Prof. A. Biswas
7.	Dipanwita Halder	Lifestyle analysis of PG students of BCKV in terms of smartphone usage	Perof. S. K. Acharjee
8.	DristikaJairu	Altitude extension of tea : perception of social ecology and climate change	Prof. S. K. Acharjee
9.	Gourav Roy	Television news channels during pandemic : the approach and content analysis	Prof. A. Biswas
10.	Jayaprakash. H. R	A study on entrepreneurial behaviour of mango growers in Ramanagar district of Karnataka state	Prof. T. K. Mandal
11.	Kabita Tamang	Availability and prioritization of major ntfps on the basis of livelihood and income generation in Kalimpong district of West Bengal	Prof. S. Mondal
12..	Mirjeng Terang	A study on the extent of rural youth participation in farming in east Karbianglong district of Assam	Prof. T. K. Mandal
13.	Mrityunjoy Mahato	Performances of Kalyan KVK and the changes analysis form a system vision	Prof. A. Biswas
14.	Prasanta Mondal	On farm conservation agriculture : perception, possibility and practices by the farmers	Prof. S. Mondal
15.	Priyanjali Das	Impact of lockdown due to covid-19 on the students of agricultural universities of West Bengal.	Prof. D. Basu
16.	Rajdeep Aich	Immediate and post covid-19 impact on agriculture, farmers and farming community in West Bengal with probable suggestions to combat it.	Prof. D. Basu
17.	Rekha Khalkho	Factors affecting adoption of maize cultivation replacing the jute cultivation in Chopra block, Uttar Dinajpur district	Prof. S. Mondal
18.	Rohan Bhaduri	Profitability of betel vine cultivation with reference to seasonality and leaf size	Prof. S. Mondal
19.	Sankar Dayal Mahato	Health, nutrition and calorie intake of farmer : the relation and interaction	Prof. A. Biswas
20.	Santa Sabuj Saha	K.A.P. (knowledge, attitude and practice) approaches to covid19 : the students' response	Prof. A. Biswas
21.	Shehanaz Alam	Understanding the attitude of farm families towards agriculture as a profession	Prof. T. K. Mandal

Sl. No.	Name of the student	Thesis title	Name of the chairman
22.	Swagata Chatterjee	Understanding the preferences of Ph.D and master degree agricultural and horticultural students towards e learning courses	Prof. D. Basu
23.	Swagata Ghoshal	The ecology of health : farmers in a dynamic agro-ecosystem	Prof. S. K. Acharjee
24.	Sk Wasaful Quader	The impact of Kolaghat thermal power station on the functioning social ecology : the perception analysis of farmers on selected enterprises and issues in surrounding areas	Prof. S. K. Acharjee
Department of Plant Pathology			
1.	Jayanta Mandal	Study of maydis leaf blight disease of maize in respect of symptom, pathogen, yield loss and management	Dr. S. Debnath
2.	Abhishek Sarkar	Studies of disease dynamics under different nutrient and residue level in rice-cauliflower-rice cropping system at different level of tillage management practices	Dr. A. K. Mandal
3.	Ali Hasan Siddiki	Study on foliar diseases of potato in West Bengal condition	Prof. A. Chakraborty
4.	Ankur Mukhopadhyay	Biological control of obligate plant pathogens	Prof. D. K. Mishra
5.	Anubhab Hooi	Studies on morphological and cultural characteristics of different species of *Pestalotiopsis* spp. isolated from different crops	Prof. B. N. Panja
6.	Baru Murali Krishna	Studies on effect of yeast on storage life of betel vine leaf	Dr. J. Saha
7.	Dharmappa D. Chavan	Studies on field and molecular marker based screening of promising taro (*Colocasia esculenta* var. *antiquorum*) cultivars for resistant to *Phytophthora* blight	Prof. J. K. Tarafdar
8.	DipasreeSadhukhan	Role of natural products on formulation of yeast based biocontrol product	Dr. J. Saha
9.	Durlav Hira	Pycnidia forming plant pathology causing leaf spot of potato and it's management	Prof. A. Basu
10.	Gopal Chowdhury	Standardization of cultivation method of *Pleurotusdjamor* in West Bengal	Dr. R. Sharma
11.	Halima Khatoon	Effect of plant extract and organic ammendments for the management of collar rot of cowpea and lentil	Dr. S. Dutta

Sl. No.	Name of the student	Thesis title	Name of the chairman
12.	Jasmeen Khandakar	Studies on powdery mildew affected plants grown in Nadia district of West Bengal	Prof. B. N. Panja
13.	Krishnendu Kundu	Evaluation of cheap and easily available residues for production and quality analysis of oyster mushroom (*Pleurotus florida*)	Prof. S. K. Roy
14.	Madhurima Biswas	Comparative study of three different isolates of *Rhizoctonia solani* collected from banded leaf and sheath blight disease of maize	Dr. S. Debnath
15.	Moumita Panda	Population dynamics of *Rhizobium* in green gram in different tillage under conservation agriculture	Prof. S. Das
16.	Rajdeep Banerjee	*Alternaria* leaf spot of potato and its management	Prof. A. Basu
17.	Ranajit Kundu	Comparison between different screening methods of spot blotch of wheat	Dr. S. Mahapatra
18.	Sabyasachi Mukhopadhyay	Image processing system based analysis of downy mildew disease severity of cucurbits and its relationship with weather variables	Dr. S. Dutta
19.	Subham Dutta	Detection and characterization of banana bunchy top virus in West Bengal	Prof. J. K. Tarafdar
20.	Susmita Oraon	Morpho-molecular characterization of *Phyllostica capitalensis,* the causal agent of curry leaf spot disease and it's management using botanicals and bioagents	Prof. G. Mandal
Department of Soil and Water Conservation			
1.	Arpita Das	Effects of manures and mulching in conservation of soil and water along with crop productivity of brinjal in Gangetic alluvium under sirish (*Albizza lebbec*K.) based agrisilviculture system	Prof. N. C. Das
2.	Biswajit Saren	Variation in bulk density and organic carbon of soil under different tree coverage in new alluvial zone	Dr. S. Panda
3.	Falguni Kar	Effects of manures and mulching on conservation of soil and water along with crop productivity of chilli in Gangetic alluvium under lamboo (*Dysoxylumbine ctariferum*) based agrisilviculture system	Prof. N. C. Das

Sl. No.	Name of the student	Thesis title	Name of the chairman
4.	Milan Hembram	Variation in bulk density and organic carbon of soil under different agroforestry systems in red and laterite zone	Dr. S. Panda
5.	Moumita Khatun	Water management and mulching of tuberose in alluvial soil	Prof. R. Ray
6.	Riasha Kar	Studies on irrigation and nutrient management of jujube (*Ziziphus mauritiana*) in new alluvial soil of West Bengal	Prof. R. Ray
7.	Rajesh Pradhan	Variation in bulk density and organic carbon content of soil under different crop covers in new alluvial zone	Dr. S. Panda
8.	Sagnika Bhattacharyya	Effect of jute caddies on physico-chemical properties of soil under chilli production	Prof. S. K. De
9.	Sourav Murmu	Efficiency of jute agro textile in some soil quality indices under groundnut production	Prof. S. K. De
10.	Subhayan Das	Effect of manures and mulching on conservation of soil and water along with crop productivity of tomato in Gangetic alluvium under shimul (*Bombax ceiba)* based agrisilviculture system	Prof. N. C. Das
11.	Supriyo Sarkar	Land and water resources in Balurghat block of West Bengal and it's optimum utilization	Prof. R. Ray
Department of Agricultural Economics			
1.	Arani Roy	A study on growth and instability of major crops in West Bengal	Prof. B. K. Bera
2.	Auindrila Biswas	A comparative study of the economic impact analysis between traditional and integrated farming systems in Nadia district of West Bengal	Dr. S. Chatterjee
3.	Cibin J Das	Effects of agro-meteorological parameters of yield, production and farm gate prices of principal crops in Kerala state of India	Prof. H. Ali
4.	Dhiman Sarkar	Economic analysis of jute cultivation in Cooch Behar district of West Bengal	Dr. G. Dey
5.	Diptesh Roy	A comparative study on economics of potato cultivation in Jalpaiguri and Nadia districts in West Bengal	Dr. G. Dey
6.	G. Mahesh Reddy	Economic analysis of groundnut cultivation in Peddakothally block of Nagarkurnool district of Telangana state	Prof. A. K. Maiti

Sl. No.	Name of the student	Thesis title	Name of the chairman
7.	Kiran. S. E	Economics of milk production in Tumkur district of Karnataka	Prof. S. Mukhopadhyay
8.	Kunal Saha	Economics of production and marketing of onion in Chakdaha block of Nadia district in West Bengal	Prof. A. K. Maiti
9.	Riya Chakraborty	Economic impact assessment of conservation agriculture : a case study in Nadia district of West Bengal	Dr. S. Chatterjee
10.	Md. Saheen Akhtar	Problem and prospects of wheat cultivation of Malda district of West Bengal	Prof. A. K. Nandi
11.	Samir Tudu	Rural non-farm employment in Chhatna block of Bankura district in West Bengal	Prof. S. Mukhopadhyay
12.	Sourakanti Sarkar	A study on behaviour of market arrivals and prices of some important crops in West Bengal	**Prof. B. K. Bera**
13.	Subhradip Pal	Economics of potato cultivation in Dhaniakhali block of Hooghly district in West Bengal	Prof. A. K. Nandi
Department of Plant Physiology			
1.	Ankam Shashank	Crop and quality parameters of groundnuts (*Arachis hypogaea* L.) as influenced by boron and zinc	Prof. S. Mondal
2.	Oksana Mandal	Evaluation of genotypes and variation in grain filling characters under terminal heat stress in wheat [*Triticum aestivum* L.]	Prof. A. K. Pal
3.	Sayandeep Sutradhar	Effect of potassium nitrate and hydrogen peroxide on growth and biochemical parameters of mungbean [*Vigna radiata* (L.) Wilczek] seedling under cadmium stress	Prof. A. K. Pal
Department of Agricultural Biochemistry			
1.	Subhadip Banerjee	Antioxidant properties of jute leaves	Prof. A. Bhattacharya
2.	Tadela Susmitha	Textural and nutritional properties of pigmented rice based product	Prof. S. Pal
Department of Agricultural Chemicals			
1.	ArkaGangopadhyay	Chemistry and formulation of *Pachyrhizus* seed oil as possible biopesticide	Prof. R. K. Kole
2.	Kanad Mukherjee	Studies on residues and dissipation of fluensulfone and fluopyram in/on tomato	Dr. R. Karmakar

Sl. No.	Name of the student	Thesis title	Name of the chairman
3.	Rounak Saha	Development of a multiresidue method for analysis of multiclass pesticides in vegetable by gas and liquid chromatography with triple quadruple tandem mass spectrometry	Dr. S. Roy
4.	Sayem Akhtar	Deltamethrin residues stability in brinjal fruits under laboratory condition	Prof. H. Banerjee
5.	Subhajit Ruidas	Development evaluation of user and environmental friendly emulsifiable concentrate formulation of plant growth regulator	Dr. D. K. Hazra
Department of Agricultural Meteorology and Physics			
1.	Aishi Mukherjee	Radiation interception and radiation use efficiency of field pea grown in new alluvial zone of West Bengal	Prof. S. Banerjee
2.	Ankita Chakma	Exploration of weather parameters on productivity component of field pea (*Pisum sativum*) under different management practices	Prof. G.Saha
3.	Ankita Mallick	Assessment of district wise climate change scenario of West Bengal based on thornthwaite classification scheme	Prof. G. Saha
4.	Arpan Paul	Possibility of extending transplanting window of kharif rice through meteorological indices	Dr. A. Mukherjee
5.	Arpita Ghosal	Impact of future climate on water requirement and use by some principal rabi crops in different agroclimatic zones of West Bengal	Prof. A. Saha
6.	Debabrata Biswas	Studies on microclimate and water use pattern of green gram in lower Gangetic plains of West Bengal	Prof. A. Mukherjee
7.	Dibyendu Roy	Spatio-temporal rainfall analysis over Mahanadi river basin of India	Prof. L. Das
8.	Dolgobinda Pal	Study of photosynthetically active radiation (par) utilization efficiency of maize, cowpea and kharif rice grown under different conservation agricultural practices	Prof. S. Banerjee
9.	Koushik Oraon	Assessment of rainfed crop potential in the Bankura district of West Bengal	Prof. A. Saha
10.	Piyali Sarkar	Assessment of changes in mangrove forest cover of sundarban region of India and Bangladesh using remote sensing techniques	Prof. M. K. Nanda

Sl. No.	Name of the student	Thesis title	Name of the chairman
11.	Shirsanta Thakur	Impact of solar radiation on growth and development of *boro* and *kharif* rice over a location of West Bengal	Prof. L. Das
12.	Shramana Talapatra	Assessment of *boro* rice scenario of nadia district of West Bengal (India) by using modis data products	Prof. M. K. Nanda
13.	Swayan Sikha Priyadarsini	Performance of some important medicinal plants under changed bio-climate	Prof. G. Saha
Department of Genetics and Plant Breeding			
1.	Biswajit Pramanik	Enhanced *in-vitro* mass propagation and clonal fidelity assessment in *Bacopa monnicri* (L.) Pennell	Dr. S. Sarkar
2.	Camellia Das	Identification of blight and collar rot tolerance lentil and confirmation of the causal organisms by rdna sequencing	Prof. S. Bhattacharya
3.	Debjani Mandal	Morphological and biochemical analysis of two cultivated species of jute	Dr. A. Roy
4.	Eashan Mukherjee	*Invitro* regeneration, clonal fidelity assessment of and enhanced reserpine production in Indian snakeroot (*Rauvolfia serpentina*)	Dr. S. Gantait
5.	Gunti Vinod Kumar	Assessment of genetic diversity and variability in tuberose (*Agave amica*) using agro-morphological traits	Prof. R. Sadhukhan
6.	Mahatab Ali	Genetic variability studies in relation with shattering tolerance in mung bean (*Vigna radiata* (L.) Wilczek)	Dr. G. S. Mandal
7.	MousumiMurmu	Genetic analysis of some advanced breeding lines of bread wheat (*Triticum aestivum* L.) grown under new alluvial zones of West Bengal	Prof. S. Mukherjee
8.	Neladri Sekhar Sarkar	A study on direct *in vitro* regeneration of Sphagneticolacalendulacae	Dr. S. Sarkar
9.	Pavan Kumar Yakkali	Studies on combining ability for yield and related traits in green gram	Prof. R. Sadhukhan
10.	Pritam Roy	Phenotyping and trait linked molecular marker based screening against spot blotch in bread wheat (*Triticum aestivum* L.)	Dr. A. Maji
11.	Sagnik Chatterjee	Study on genetic variability and association of characters of some germplasm in mungbean (*Vigna radiata)*	Dr. G. S. Mandal

Sl. No.	Name of the student	Thesis title	Name of the chairman
12.	Shamba Ganguly	Variation in p-acquisition and root related morphology at the early vegetative stage of lentil (*Lens culinaris)* and its acid phosphatase activity	Prof. P.K. Bhattacharyya
13.	Soubhik Mondal	Identification of stable, high-yielding black gram (*Vigna mungo* L.) mutants suitable for West Bengal	Prof. P.K. Bhattacharyya
14.	Sourav Chakraborty	Genetic variability studies in relation with collar rot resistance in lentil (*Lens culinaris* Medik.)	Dr. A. Das
15.	Veerabhadrappa Guggari	Study of variability and storage protein content in urdbean	Dr. A. Roy

Faculty of Horticulture

Sl. No.	Name of the student	Thesis title	Name of the chairman
Department of Floriculture and Landscape Architecture			
1.	Charli Sharma	Studies on the effect of drying methods for nutraceutical parameters in damask rose(*Rosa damascena* Mill.)	Dr.J. Majumder
2.	Kalyan Chettri	Evaluation of hybrid tea rose cultivars	Prof. M. Mitra (Sarkar)
3.	Subhajit Nandi	Effect of some chemicals on growth and flowering of pansy(*Viola x Wittrockiana gams.*)	Prof. T. Mondal
4.	Subham Paul	Changes in composition of macromolecules in bulbs of tuberose (*Polianthes tuberosa* L.) as influenced by stages of development	Dr. S. S. Gantait
5.	Sujoy Ghosh	Study on effect of macro and micro nutrients on growth and flowering of anthurium(*Anthurium andraeanum*) var. tropical red under West Bengal plains	Dr.T. K. Chowdhuri
6.	Tanushree Koley	Effect of plant growth regulators on growth and flowering of Chinaaster(*Callistephus chinensis* L.)	Prof. A. K. Pal
Department of Fruit Science			
1.	Abdul Latif Ansary	Studies on the effect of floor management of mango and litchi orchards using banana biomat mulch and leguminous cover crop for sustainable production	Dr. S. Debnath
2.	Niladri Shekhar Dutta	Effect of time and severity of pruning on growth, flowering and fruiting of ber cv. Baukul	Prof. S. Kundu

Sl. No.	Name of the student	Thesis title	Name of the chairman
3.	Noor Habeeb Ramez	Effect of bagging on yield and quality of mango cv. Himsagar	Prof. Md. A. Hasan
4.	Paulomi Roy	Effect of pre- harvest fruit bagging with different coloured cellophane paper bag in guava	Prof. S. K. Sarkar
5.	Rajdeep Mohanta	Performance study of suckers vs. tissue culture of banana cv. Grand naine (aaa) in Gangetic plains of West Bengal	Prof. F. K. Bauri
6.	Riya Paul	Performance study of aab genomic group of banana under Gangetic plain of West Bengal	Prof. F. K. Bauri
7.	Samarpita Roy	Performance of off-season mango varieties based on quality and storage life	Dr. D. Majhi
8.	SanghamitraLayek	Seed germination and seedling growth of dragon fruit as influenced by different growing media	Prof. Md. A. Hasan
9.	Shafiullah Malikzada	Studies on the plant morphology, fruit character and yield of dragon fruit (*Hylocereus sp.*)	Prof. Md. A. Hasan
10.	Soumi Lo	Effect of scion cultivars and preconditioning on graft success, survibility and growth in mango	Prof. S. Kundu
11.	Subhamoy Pal	Response of corrective pruning on vegetative growth of litchi var. Bombai	Dr. D. Majhi
12.	Susmita Ghosh	Studies on maturity indices and physico-chemical changes during development of dragon fruit (*Hylocereus* sp.)	Prof. Md. A.Hasan
13.	Susan Subba	Studies on the effect of floor management of banana and guava orchards using banana biomat mulch and leguminous cover crop for sustainable production	Dr. S. Debnath
14.	Tamashree Ghosh	Studies on effect of brassinolide on physico-chemical properties of litchi cv. bombai grown in new alluvial zone of West Bengal	Prof. P. Dutta
15.	Tanmoy Mondal	Effect of foliar application of micronutrients on growth, yield and fruit quality on young plants of Thai guava(*Psidium guajava* L.)	Prof. S. K. Sarkar
Department of Post Harvest Management			
1.	Anurag Gupta	Development of protein enriched eggless fruit cake	Prof. I. Chakraborty
2.	Dewan Rasid Mallick	Studies on value addition of chrysanthemum by tinting	Prof. S. Chakraborty

Sl. No.	Name of the student	Thesis title	Name of the chairman
3.	Dipankar Tudu	Preparation of jam from karonda (*Carissa carandas* Linn.) cv. Pink White and ber (*Zizyphus mauritiana*Lamarck) var. BAU	Prof. A. K. Banik
4.	Subhadip Chowdhury	Nutritional facts and storage behavior of arrowroot	Dr. S. Mitra
5.	Suman Mondal	Effect of perforated and non-perforated films on quality and storage life of guava fruits(*Psidium guajava* L.)	Dr. P. K. Thakur
6.	Sushmita Rana	Study on the process standardization and quality evaluation of guava spread	Prof. (Mrs.) I. Chakraborty
Department of Plantation, Spices, Medicinal and Aromatic Crops			
1.	Anirban Mahato	Production and storability of betelvine leaves (*Piper betle* L.) cv. Shimuralideshi as influenced by soil application of different oil cakes	Prof. A.. Pariari
2.	HrishavSaha	Integrated nutrient management of ginger (*Zingiber officinale*) grown as inter crop with curry leaf(*Murraya koenigii*)	Prof. D. K. Ghosh
3.	Ritika Biswas	Influence of bio-stimulants on growth, yield and quality of coriander cv. Co-1	Prof. N. Chattopadhyay
4.	Sangam Subba (Lawti)	Evaluation of different potato varieties and sweet potato germplasms compatible under coconut based cropping system	Dr. D. K. Ghosh
5.	SrijitAdhikary	Effect of gamma irradiation on the yield and quality of coriander (*Coriandrum sativum* L.) leaf and seed	Prof. A. B. Sharangi
6.	SoumitraBera	Effect of growth regulators on growth, yield and quality of fennel *(Foeniculum vulgare* Mill*.)*	Prof. A. Pariari
Department of Vegetable Science			
1.	Arindam Bhunia	Characterization and evaluation of morphological and yield components in vegetable *Citrullus*	Prof. M. K. Pandit
2.	Debarati Barman	Effect of intercropping on growth, yield and quality parameter of broccoli(*Brassica oleracea* L.var *italica*)	Dr. P. Choudhuri
3.	Dibya Jyoti Mukhia	Variation for different characters due to ripening inhibiting mutant genes in homozygous and heterozygous condition in tomato	Dr. C. Karak
4.	Narendra Nath Hansda	Evaluation of genotypes of winged bean(*Psophocarpus tetragonolobus* L.) under West Bengal condition	Prof. U. Thapa

Sl. No.	Name of the student	Thesis title	Name of the chairman
5.	Natasha Parvin	Influence of micro-nutrients on growth, yield and quality of pointed gourd(*Tricosanthes dioica*) under varied nutrient regime	Prof. S. B. Chattopadhyay
6.	Riya Ghosh	Performance of late cauliflower hybrid under different tillage operations and nutrition levels	Prof. A. Chattopadhyay
7.	Shibashis Das	Genetic divergence, heterosis and combining ability in cucumber (*Cucumis sativus* L.)	Prof. A. Chattopadhyay
8.	Subhashis Kundu	Yield components, genetic divergence and heterosis in bitter gourd(*Momordica charantia* L.)	Prof. A. R. Mandal
9.	Sumi Dey	Evaluation of kharif onion (*Allium cepa* L.) germplasms	Prof. T.K. Maity
10.	Sutirtha Das	Studies on flowering and fruiting behaviour in ridge gourd	Prof. P. Hazra
11.	Tanmoy Ghosh	Assessment of combining ability, gene action and heterosis for yield and its components in faba bean (*Vicia faba* L.)	Prof. M. K. Pandit

Faculty of Agricultural Engineering

Sl. No.	Name of the student	Thesis title	Name of the chairman
Department of Soil and Water Engineering			
1.	Bapi Bhowal	Study on sprinkler irrigation in wheat under different fertilizer, tillage and residue practices	Prof. R. K. Biswas
2.	Kallol Chandra	Assessment of land use land cover changes of bolpur subdivision of West Bengal using satellite data	Dr. A. Chowdhury
3.	Mangal Murmu	Assessment of changes in land use and land cover pattern in Bishnupursubdivision, Bankura district, West Bengal using remote sensing and GIS : a case study	Dr. A. Chowdhury
4.	Manik Biswas	Study on sprinkler irrigation in maize under different fertilizer, tillage and residue practices	Prof. R. K. Biswas
5.	Montubor Mrong Marak	Identification of artificial recharge sites using an integrated approach of remote sensing and gis for Mayurakshi river basin, West Bengal	Dr. A. Chowdhury
6.	Ahire Sushmita Subhash	Determination of spatio-temporal changes in land use land cover pattern using Rs. and GIS of Nasik district, Maharastra	Dr. A. Chowdhury

Sl. No.	Name of the student	Thesis title	Name of the chairman
7.	Rakesh Das	Study of drip irrigation on broccoli under different irrigation schedules, fertilization and mulch practices	Prof. R. K. Biswas
8.	Supriya Mandal	Comparison of different evapotranspiration estimation methods for Murshidabad district, West Bengal	Dr. A. Chowdhury
9.	Amit Kumar Bar	A novel multivariate linear model for ndvi in a tropical coastal region	Prof. R. K. Biswas
10.	SkRafikulJaman	Study on drip irrigation in tomato under different mulch, fertilizer and tillage practices	Prof. R. K. Biswas
Department of Post Harvest Engineering			
1.	Chaman Kumar	Effect of irradiation on shelf life of tomato and tomato products	Prof. S. Mukherjee
2.	Dahihande Pranali Bharatkumar	Studies on dehydration of pumpkin and product quality	Prof. S. Mukherjee
3.	Deepanwita Rakshit	Performance analysis of a solar thermal network attached to a vapour absorption refrigeration system	Prof. P. K. Sahoo
4.	Pakeeza Khatun	Design and development of growth rate monitoring system for horticultural crops and plant stem	Prof. B. Chakraborty
5.	Sudipta Mandal	Use of aloe vera gel as bio preservative to extend the shelf life of fruits and vegetables	Dr. A. Karmakar
6.	Awadhesh Kumar Yadav	Performance analysis of air-handling unit (ahu) attached to a vapour absorption refrigeration system	Prof. P. K. Sahoo
Department of Farm Machinery and Power			
1.	Abhijit Haldar	Design and development of solar powered water pumping system	Prof. D. Saha
2.	Akshay Chandrakant Fartade	Design and development of sliding metering mechanism for modification of power tiller operated zero-till seed drill	Prof. S. Karmakar
3.	Ankita Banerjee	Design and development of a bund packer for power tiller operated bund former	Prof. P. S. Chattopadhyay
4.	Anupam Sahoo	Design optimization and field evaluation of power tiller operated sliding type potato digger	Dr. D. Saha
5.	Dipanjan Mondal	Development and evaluation of a manually operated rotary paddy weeder for wet lands	Prof. P. S. Chattopadhyay

Sl. No.	Name of the student	Thesis title	Name of the chairman
6.	Lolugu. Prasanna Lakshmi	Design and development of a suitable mechanism for digging pits by using a mechanized auger	Prof. P. S. Chattopadhyay
7.	Pijush Chandra Das	Optimization of design parameters of rotary weeder	Prof. P. S. Chattopadhyay
8.	Prabhas Sahoo	Development and evaluation of a power tiller operated zero-till seed-cum fertilizer drill	Prof. P. S. Chattopadhyay
9.	Protap Halder	Design and development of power operated potato furrow maker	Prof. D. Saha
10.	Shivnarayan Ashruji Kanade	Development of power tiller operated flail mower attached to zero-till seeding equipment	Prof. S. Karmakar
11.	Subal Hembram	Design, fabrication and testing of disc types rotary weeder	Prof. P. S. Chattopadhyay
12.	Suvendu Bhattacharjee	Performance evaluation of zero till seed-cum fertilizer drill for rice-mustard cropping system : an energy audit with respect to conservation agriculture(ca)	Prof. S. Karmakar

List of Ph. D. Thesis Submitted at BCKV 2020

Faculty of Agriculture

Sl. No.	Name of the student	Thesis title	Name of the chairman
Department of Agronomy			
1.	Sahuji Bandyopadhyay	Effect of integrated weed management and different tillage practices on rice-wheat cropping system in the lower gangetic plains	Prof. C. K. Kundu
2.	Malay Kumar Mandal	Comparative study of different nutrient management practices under rice based cropping system in new alluvial zone of West Bengal	Prof. M. Pramanick
Department of Agricultural Biotechnology			
1.	Umme Salma	Accelerated microcloning and *in vitro* elicitation of pharmacologically active ingredients in *Eclipta alba* (L.) Hassk	Prof. N. Mandal
Department of Agricultural Biochemistry			
1.	Subhrojit Dolui	Nutritional quality of some aromatic rice landraces of West Bengal	Prof. A. Bhattacharya
2.	Torit Baran Bagchi	Studies on physicochemical and antioxidative properties of some pigmented quality rice and their products	Prof. S. Pal
Department of Agriculture Chemistry and Soil Science			
1.	Amit Phonglosa	Study of the suitability of selected extractants for available boron and its management in sunflower (*Helianthus annuus* L.) in some soils of West Bengal	Dr. K. Bhattacharyya
2.	Madhurima Banik	Water productivity and nitrogen dynamics in soil under microsprinkler irrigated onion	Prof. S. K. Patra
3.	Dipsikha Chakrabarty	Studies on nitrogen dynamics of rice soil under nutrient and water management	Prof. P. K. Patra
4.	Gayatri Sahu	Saturation deficit and pools of organic carbon in soils under long-term experiments	Prof. B. Mandal
Department of Agricultural Entomology			
1.	Labani Maity	Impact of Agromeerologica parameters and biotic factors on the population fluctuation of okra pests and their managemnt using bio-inputs	Dr. A. Samanta
2.	Bilash Chandra Das	Varietal evaluation and insecticidal management for pod borer complex of pigeon pea (*Cajanus cajan* L. Millsp.) under West Bengal condition	Dr. P. P. Dhar

Sl. No.	Name of the student	Thesis title	Name of the chairman
3.	Soumita Pal	Morphological and biochemical basis of resistance and development of management modules against whitefly, *Bemisia tabaci* (Genn) in tomato	Prof. B. K. Das
4.	Prasun Karmakar	Identification of the basis of resistance in cabbage varieties and assessment of management modules against diamondback moth, *Plutella xylostella* (L.)	Dr. G. Chakraborty
5.	Prahlad Sarkar	Root knot nematode infestation in West Bengal: identification and spatial distribution	Dr. M. R. Khan
Department of Agricultural Extension			
1.	Aditya	Assessment of farm typologies for targeting extension intervention applying multidimensional analysis and geographic information system, in agro-climatic zone IV of Jharkhand	Prof. D. Basu
Department of Agricultural Statistics			
1.	Kanchan Sinha	A study on short time-series modeling and forecasting in agriculture	Prof. P. K. Sahu
2.	Sanjeeta Biswas	Statistical analysis of irrigation practices in India with special emphasis to West Bengal	Prof. B. Bhattacharyya
Department of Agricultural Meteorology and Physics			
1.	Jaybhaye Pralhad Rambhaji	Impact of water saving techniques on performance of broccoli under various water stress condition	Prof. A. Mukherjee
Department of Genetics and Plant Breeding			
1.	Joyashree Mallick	Development and characterization of a recombinant inbred population of greengram [*Vigna radiate* (L.) C. Wilczek] suitable for mapping yield attributing traits and salinity tolerance	Dr. S. Bhattacharyya
Department of Plant Pathology			
1.	Moirangthem Indira Devi	Detection, indentification and management of pathogens associated with important vegetable seeds in gangetic alluvial region of West Bengal.	Prof. P. S. Nath
2.	Trina Sandham	Studies on fusarium wilt of chickpea (*Fusarium oxysporum* f.sp. *ciceri*) and its ecofriendly management under field condition	Prof. S. Das
Department of Plant Physiology			
1.	Riyajul Islam	Characterization and floral induction of *Bengla and metha* types of betelvine (*Piper Betle* L.)	Dr. S. Mondal

Sl. No.	Name of the student	Thesis title	Name of the chairman
2.	Suryakant Hembram	Comparative physiology of salt and water stress in groundnut (*Arachis hypogaea* L.)	Prof. A. K. Pal
3.	Gaikwad Dinkar Jagannath	Betelvine: Crop physiological responses to light environments, organic and inorganic supplements and standardization of protocol for nutagenesis	Dr. S. Mondal
Department of Seed Science and Technology			
1.	Bingiala Laloo	Response of french-been genotypes towards seed invigoration treatment for qualtitative and qualitative improvement	Dr. P. Chakraborti
Department of Agricultural Economics			
1.	Shyam Prakash Singh	Economics of mango production in Lucknow district of Uttar Pradesh	Prof. A. K. Nandi
2.	Adarsha L K.	Characterization and economic evaluation of predominant farming systems in southern transition zone of Karnataka, India	Dr. S. Chatterjee
3.	Ome Jopir	An economic study on production and marketing of mandarin orange (*Citrus reticulata*) cultivation in Arunachal Pradesh	Prof. B. K. Bera
4.	Janee Yumlembam	Study on income and employment generation through the utilization of common property resources in Manipur	Dr. A. K. Nandi
5.	Sorokhaibam Somina Devi	A study on the economics of mulberry cultivation and production and marketing of silk cocoons in Manipur	Prof. B. K. Bera
6.	Bishnu Charan Mahato	Studying the scope for improvement in production promotion and marketing of lac-based products in Purulia district	Prof. A. Mitra
7.	Sonia Sagolsem	A study on regional variations in crop production and crop productivity in North Eastern and Eastern India	Prof. A. Mitra
8.	Arunima Konar	Socio-economic study of household livelihood security in unorganised sectors of Bankura district of West Bengal	Prof. Md. H. Ali

Faculty of Horticulture

Sl. No.	Name of the student	Thesis title	Name of the chairman
Department of Floriculture and Landscape Architecture			
1.	Raghupathi B.	Standardization of dehydration technology for some ornamental flowers and foliages	Dr. S. S. Gantait
2.	Manaswita Sil	Effect of plant growth regulators and pruning on hybrid tea rose cv. First Red	Dr. M. Mitra (Sarkar)
3.	Ayandip Biswas	Regulation of flowering shoots and nutritional management in hybbrid tea roses	Dr. M. Mitra (Sarkar)
Department of Fruit Sciene			
1.	Kaushik Das	Technology refinement for quality fruit production of litchi cv. Bombai grown in new alluvial zone of West Bengal	Prof. P. Datta
Department of Post Harvest Management			
1.	Bukya Krishna	Cultivar diversity, quality characterization and valu chain analysis of mango grown in the district of Malda	Dr. A. K. Banik
Department of Plantation, Spices, Medicinal and Aromatic Crops			
1.	Radhajogita Mondal	Integrated nutrient management in turmeric employing single node cutting technique for improving yield and quality	Prof. J. K. Hore
2.	Karthik C. S.	Impact of climatic variables and integrated nutrient management on performance of black pepper (*Piper nigrum* L.) in Gangetic alluvial plains of West Bengal	Dr. D. K. Ghosh (LKN)
3.	Aakkabathula Chandini Raj	Characterization of onion (*Allium cepa* L.)	Prof. A. B. Sharangi
4.	Paranay Kumar	Coconut based cropping system increasing productivity and profitability	Prof. D. K. Ghosh
5.	Sarthak Bhattacharya	Growth promoters and fungicides: their impact on quantitative and qualitative characters in onion (*Allium cepa* L.)	Prof. A. Bandyopadhyay
Department of Vegetable Crops			
1.	Sanket Kumar	Characterization and genetic analysis in faba bean (*Vicia faba* L.) genotypes and their screening against important diseases	Prof. M. K. Pandit

Sl. No.	Name of the student	Thesis title	Name of the chairman
2.	Shubhrajyoti Saha	Genetic variation, interrelationship and gene action for important fruit characters in bitter gourd (*Momordica charantia*)	Prof. P. Hazra
3.	Praveen Kumar Maurya	Role of intercropping on growth, yield, quality, population dynamics of major insect pests and economic impacts in brinjal (*Solanum melongena* L.)	Dr. P. Choudhuri
4.	Jhilki Kabiraj	Influence of different vegetable based cropping sequence on productivity, nutrient use efficiency and soil fertility	Prof. A. R. Mandal

Research Articles

1. Acharya, S.K., Ghosh, A., Mahato, M., Haque, M., Mazumder, D., Ghoshal, S. and Biswas, A. (2020) Socio-ecological correlates of attitude towards KVK functioning: A multivariate analytical approach. *Curr. J. Agric. Sci. Technol*. 23–31 (NAAS: 5.32)
2. Adak, S., Datta, S., Bhattacharyya, S., Ghose, T. K. and Lahiri Majumder, A. (2020) Diversity analysis of selected rice landraces from West Bengal and their linked molecular markers for salinity tolerance. *Physiol. Mol. Biol. Pl.* 26(4):669–82. (NAAS: 8.41).
3. Adhikary, S., Banerjee, S., Ghosh, M., Gunri, S.K. and Mukherjee, B. (2020) Thermal indices and yield correlations of sesame (*Sesamum indicum* L.) during summer in New Alluvial Zone of West Bengal. *Int. J.Curr. Microbiol. App. Sci*. 9(3): 109-113 (NAAS: 5.38).
4. Ahammed, G. J., Gantait, S., Mitra, M., Yang, Y. and Li, X. (2020) Role of ethylene crosstalk in seed germination and early seedling development: a review. *Pl. Physiol Biochem.* 152 : 124-131 (NAAS: 10.27)
5. Akhter, J., Das, L. and Deb, A. (2020) Assessing future water stress scenarios over six nuclear power plant locations of India through downscaled CMIP5 models. *Theor. App. Climatol.* 142(1):191-204 (NAAS: 8.88)
6. Akhter, J., Das, L., Deb, A. and Majumder, D. (2020) Assessing the performances of multi-sources gridded data to estimate long term rainfall change over north-central region of India. *Mausam*. 71(2):225-232 (NAAS: 6.37)
7. Alam, S. and Mandal, T.K. (2020). Relationship between the profile of farmers and their attitude towards agriculture as a profession. IOSR J. *Agric. Vet. Sci*. 10(13): 20-22.
8. Atta, K., Chettri, P. and Pal, A. K. (2020) Physiological and biochemical changes under salinity and drought stress in ricebean [*Vigna umbellate* (Thunb.) Ohwi and ohashi] seedlings. *Int. J. Environ. Climate Change*. 10(8): 58-64 (NAAS: 5.29)
9. Atta, K., Pal, A.K. and Jana, K. (2020) Effects of salinity, drought and heavy metal stress during seed germination stage inricebean [*Vigna umbellata* (Thunb.) Ohwi and Ohashi]. *Pl. Physiol. Report*. 26(1): 109-115 (NAAS: 5.18)
10. Baidya, B.K. and Chakrabarty, S. (2020) Influence of packaging materials and storage duration on quality of flower strings of *Polianthes tuberosa* Linn. cv. Prajwal. *Int. J. Curr. Microbiol. App. Sci*. 9 (3): 664-674 (NAAS: 5.38)
11. Baidya, B.K., and Chakrabarty, S. (2020) Increasing vase life of tinted spikes of *Polianthes tuberosa* Linn. cv. Prajwal by adding floral preservatives. *Int. J. Curr. Microbiol. App. Sci*. 9(8): 2736-2758 (NAAS: 5.38)
12. Baidya, B.K., Chakrabarty, S. and Sethy, P. (2020) Extending shelf life of loose tuberose florets (*Polianthes tuberosa* Linn. cv. Prajwal) by quick dipping in boric acid and sodium benzoate followed by low temperature storage. *Int. J. Chem. Stud.* 8(3): 2607-2612 (NAAS: 5.31)

13. Bakshi, P., Sinha, A. and Basu, D. (2020) Indigenous technical knowledge in processing of date palm juice and its implications on livelihood in Nadia district of West Bengal. *J Crop Weed*. 16 (2):130-134.

14. Bal, S., Maity, T. K. and Maji, A. (2020) Genetic divergence studies for yield and quality traits in onion (*Allium cepa* L.). *Int. J. Curr. Microbiol. Appl. Sci*. 9(6): 3201-3208 (NAAS: 5.38)

15. Bala, S.C. (2020) Population fluctuation and management of gram pod borer, *Helicoverpa armigera* (Hubner) infesting chickpea in new alluvial zone of West Bengal, India. *J. Ent. Zoo. Stud.* 8(1):262-266 (NAAS: 5.53)

16. Bala, S.C. and Nihal, R. (2020) Bio-efficacy of some newer insecticides against whitefly, *Bemisia tabaci* (Gennadius) and thrips, *Scirtothrips dorsalis* (Hood) infesting *Bt* cotton. *Bioscan*. 15(1): 55-59 (NAAS: 5.26)

17. Bandyopadhyay, A., Ghosh, D.K. (LKN), Biswas, B., Parameswarappa, M.H. and Timsina, J. (2020) Fertigation effects on nutrient use efficiency, energy productivity, and economics of coconut (*Cocos nucifera* L.) cultivation in the eastern Indo-Gangetic plains of South Asia. *Int. J. Fruit Sci.* https://doi.org/10.1080/15538362.2020.1812016"

18. Banerjee, A. and Pal, S. (2020) Estimation of crop losses due to major insect pests of field pea in Gangetic plains of West Bengal. *J.Ent. Zool. Stud.* 8(5): 1063-1067 (NAAS: 5.53)

19. Banerjee, A. and Pal, S. (2020) Population dynamics of gram pod borer (*Helicoverpa armigera* Hubn.) in relation to abiotic factors on field pea. *Int. J. Chem. Stud.* 8(4): 3862-3867 (NAAS: 5.31)

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Books

1. Acharya, S.K., Banik, S, Mandal, A., Chatterjee, R. and Biswas, A. (2020) *Customers' Behaviour in Retail Chain Marketing: The Approach and Analysis*. Satish Serial Publishing House, New Delhi. p. 82, ISBN: 978-81-94252-58-0.
2. Acharya, S.K., Biswas, A., Mandal, S., Chatterjee, R. and Mandal, A. (2020) *Pulse Enterprise: Sociology and Ecology*. Satish Serial Publishing House, New Delhi. p. 102, ISBN: 978-93-88020-79-4.
3. Acharya, S. K., Biswas, A., Roy, G. and Chatterjee, R.(2020) *Television News Channel in Transition: A Response to COVID Pandemic 2020*; Rathore Academic Research Publication, New Delhi, p 96, ISBN: 978-81-948753-4-5
4. Acharya, S. K.andGhoshal, S. (2020) *The Ecology of Health: Farmers in a Dynamic Agro-ecosystem*. Rathore Academic Research Publications, New Delhi. p. 291, ISBN 978-81-947760-7-9
5. Acharya, S. K., Haque, M., Chatterjee, R. and Mandal, A. (2020) *Transforming Ecology: From Farm Land to Tea Garden*. Satish Serial Publishing House, New Delhi. p 95, ISBN: 978-93-88020-77-0.
6. Acharya, S.K., Hossain, S.M., Biswas, A. and Chatterjee, R. (2020) *Artisanship and Rural Ecology: Transforming Life and Livelihood*. Satish Serial Publishing House, New Delhi. p. 123, ISBN: 978-93-88020-85-5
7. Acharya, S.K., Preethi, B., Biswas, A. and Chatterjee, R. (2020) *Self Help Group: The Income, Enterprise and Ecology*. Satish Serial Publishing House, New Delhi. p. 89, ISBN: 978-93-538-70-00-3
8. Acharya, S.K**.**, Roy, D., Chakraborty, A., Chatterjee, R. and Mondal,A. (2020) *Farming with the Basics: Productivity, Income and Livelihood*, Satish Serial Publishing House, New Delhi, p. 103, 74:ISBN978-93-90660-21-6
9. Acharya, S.K., Mukherjee, S., Gorai, S. and Das, R. (2020)*Agriculture: The Quest*,Rathore Academic Research Publication, New Delhi, p. 340, ISBN: 978-81-949375-1-7292
10. Achaya, S. K. and Jairu, D. (2020) A*ltitude Extension: Socio-ecological Dimension of Darjeeling Tea Garden* p, 340*:* ISBN: 978-81-947760-9-3
11. Biswas, A., Acharya, S.K.m Mandal, S., Chatterjee, R. and Chakraborty, A. (2020) *Food and Education*. Satish Serial Publishing House, New Delhi. p 94, ISBN: 978-93-88020-87-9.
12. Bordolui, S.K. and Chakraborty, A. (2020) *Mission Seed Technology*, Lambert Academic Publishing European Union, p 1-186, ISBN: 978-620-2-52655-5
13. Bordolui, S. K. and Chattapadhyay, P. (2020) *Hater Muthoi Beej Utpadan Prajukti*, Mehanati Prakashani, West Bengal, p 1-151, ISBN: 978-81-944384-1-0
14. Chakraborty, I., Riadh, I., Balaji, V., Sujayasree, O.J. and Mani, A. (2020) *Recent Trends and Advances in Food Science and Post Harvest Technology*, Satish Serial Publishing House, New Delhi, India, ISBN: 9789388020534

15. Chakraborty, P.S. and Biswas, C.K. (2020) *The Encyclopedic Terms Used in Animal Genetics and Breeding*, New Delhi Publishers, New Delhi. p 327, ISBN: 978-93-88879-52-1

16. Dutta, S., Sinha, A. and Basu, D. (2020) *Role of Artificial intelligence in Agriculture: Current Scenario and Future Prospects*. New Delhi Publishers, p. 111, ISBN 978-81-948993-5-8

17. Ghosh, S.K. (2020) *Cutting Edge Perspectives in Agricultural and Allied Sciences* (*Vol.I*) Scholars' Press, Republic of Maldova (Europe). ISBN-978-3-639-71361-9

18. Hazra, P. (2020) *Seed Production Technology for Vegetable, Tuber and Spice Crops*.Brillion Publishing, New Delhi, P. 651.

19. Mondal, D. and Basu, D. (2020) *Disaster Management Concept and Approaches*. CBS Publishers and Distributors, New Delhi. p 325, ISBN: 9789389396256.

20. Narain, S. and Mondal, S. (2020) *Communication Skills and Personality Development* (Hindi) Kalyani Publishers, Ludhiana. p166, ISBN:978-93-89987-17-1

21. Patel, L. C. (2020)*Fundamentals of Entomology,* Brillion Publishing, New Delhi. p 280, ISBN: 978-93-89350-42-5

22. Pradhan, K, Yolmo, Z and Acharya, S K (2020) *Indigenous Knowledge in the Terrains of Himalaya: The Life and Destiny*. Satish Serial Publishing House, New Delhi. p 129, ISBN: 978-93-53870-09-6.

23. Roy, S. and Karak, C. (2020) *Quest on Olericulture*, Agro India Publications, Prayagraj (ISBN : 978-93-84188-18-4).

24. Sharangi,A.B. (2020) *Handbook on Medicinal Plants*. Agrotech Publishing Academy, Udaipur; ISBN: 978-81-8321-511-4.

25. Sharangi, A.B. (2020) *Seed Priming: A Focus on Coriander*. Satish Serial Publishing House, New Delhi; ISBN: 978-93-53870-19-5

26. Sinha, A., Mondal, A. and Basu, D. (2020) 101 *Mobile Applications in Agriculture: A ready Reckoner*. New Delhi Publishers, p 96, ISBN 978-93-91012-03-8

27. Thapa, U., Tripathy, P. and Updhyay, A. (2020) *Production Technology of Underexploited Vegetables,*Today and Tomorrow Printers and Publishers, Daryaganj, New Delhi. India. P. 374 ISBN: 81-7019-678-X

Other Publication (Manual/Monograph/Technical Bulletin etc.)

1. Dutta, S., Roy, K., Roy Barman, A., Roy, S. K., Chattopadhyay, A., Saha, A., Jha, S., Goldar, S., Patar, S., Patsa, R., Kunal, G., Kumar, R., Sree Bharti, D. and Ghorai, A. (2020) *Tomato Chaser Pradhan Rog o Keetshatru Ebong Tar Pratikar* (in Bengali). NICRA RTPD on Tomato, Directorate of Reseach, BCKV, Kalyani, Nadia, West Bengal, p. 27.
2. Hore, J., Sarkar, S. and Roy, K. (2020) *Poschimbange Fasaler Udbhuto Krimi Samosya Samporke Ekti Poryalochona* (in Bengali). Krishi Jagaron, October, 2020, p. 10-17.
3. Pandit, M.K. (2020) *Commercialization of Seeds and Future Food Shortage*. Poriprashna Magazine: e- version.
4. Roy, S. and Karak, C. (2020) *Phy and Siological Disorders of Tropical Solanaceous Vegetables* Agriculture and Food: e-Newsletter (ISSN No: 2581-8371) 2(6):165-168.
5. Roy, S., Mani, A. and Karak, C. (2020) *Advancement in Post-Harvest Technology of Dioscorea, Stevia, Ashwagandha and Coleus.* Agriculture & Food: e-Newsletter (ISSN No: 2581-8371) 2, (5): pp.617-628.

Awards/Honour/Recognition

1. Prof. Bimal Kr. Bera has been nominated as "Member of Board of Studies" of the Department of Agricultural Economics, PSB, Viswa-Bharati.
2. Dr. Chandan Karak received the "Best Article Award" for article entitled "Physiological disorders of tropical solanaceous vegetables" published in Vol. 2(6) in Agriculture and Food e-Newsletter during 2020.
3. Dr. Dibyendu Sarkar received "Outstanding Researcher Award, 2020" from Venus International Foundation, Chennai and Society of Tropical Agriculture, New Delhi.
4. Dr. Koushik Batabyal received "Best Poster Presentation" award in the National Webinar on "Agrochemicals for upkeeping environment" organized by the Society for Fertilizers and Environment in collaboration with Bidhan Chandra Krishi Viswavidyalaya on August 27, 2020.
5. Dr. Kusal Roy acted as the expert member for the revision of syllabus and NSQF alignment of Vocational courses in Agriculture discipline of WBSCT and VE and SD West Bengal.
6. Dr. Kusal Roy discharged the responsibility of the Cheif Editor, Journal of Crop and Weed, a peer reviewed journal (ISSN: 09746315) published by Crop and Weed Science Society, BCKV, Mohanpur.
7. Dr. Kusal Roy has been selected as Associate Editor and member of the International Journal of Agriculture Sciences of Bioinfo Publications.
8. Dr. L. C. Patel received "Best Oral Presentation Award" in Global Conference on 'Emerging Agricultural Research to Endure the Predicament of COVID-19 Pandemic' organized by AESSRA, New Delhi during December 12-13, 2020.
9. Dr. L. C. Patel received "Best Assistant Professor Award, 2020" from Pearl Foundation, Madurai Tamil Nadu.
10. Dr. L. C. Patel received "Fellow Award, 2020" of Society for Biotic and Environmental Research, Khowai, Tripura.
11. Dr. L. C. Patel**,** received Young Scientist Award (2020) from Agro-Ecological Development Society, Rampur, Uttar Pradesh.
12. Dr. M. A. Hasan has been nominated on "Member of Board of Studies" of the department of horticulture and post harvest technology, Palli Siksha Bhavana, Visva-Bharati, Sriniketan, Birbhum.
13. Dr. M. A. Hasan has been nominated as "Member of the Career Advance Committee" of the Dept. of Horticulture, Bangladesh Agricultural University, Mymensingh, Bangladesh.
14. Dr. M. A. Hasan has been nominated as an "Expert Member" in the selection committee for the appointment of Professors and Associate Professors in the Department of Seed Science and Technology, BAU, Mymensingh, Bangladesh.

15. Dr. Md. Nasim Ali is serving as the Executive Editor of the Journal of Crop and Weed, a peer reviewed journal, published by Crop and Weed Science Society, BCKV, Mohanpur.
16. Dr. Partha Choudhuri acted as the expert member for the revision of syllabus and NSQF alignment of Vocational courses in Agriculture discipline of WBSCT and VE and SD West Bengal.
17. Dr. Poly Saha was awarded with "Prof. H. C. Dube Outstanding Young Scientist Award" - 2020 from ISMPP, Udaipur, Rajasthan.
18. Dr. S. Debnath was awarded as best lead presenter in Crop Improvement session during VII Group discussion of ICAR-AICRP on Fruits, January, 16-19, 2020.
19. Dr. S. K. Bordolui has been selected as an Associate Editor, Journal of Crop and Weed, CWSS, BCKV.
20. Dr. S. K. Bordolui received Fellow Award, 2020 conferred by Society of Innovative Educationalist and Scientific Research Professional, Chennai.
21. Dr. S. K. Bordolui was awarded as Fellow of STA 2020 conferred by Society of Tropical Agriculture, New Delhi.
22. Dr. S. K. Sarkar has been nominated as "Acadamic Council Member" of Dr. Y.S.R. Horticultural University, Andhra Pradesh (2020)
23. Dr. S. K. Sarkar has been selected as "Member of Screening Committee" for selection of Director of ICAR Institute in ASRB.
24. Dr. Somnath Bhattacharya selected as an External Expert of selection committee for the promotion of the Professors to Senior professors, GPB, Benaras Hindu University.
25. Prof. Somnath Bhattacharya selected as Member, Board of Research studies/Academic council, Agril Biotech, RKMVERI, Narendrapur.
26. Prof. Somnath Bhattacharya selected as Member, Board of Research studies/Academic council Department of Microbiology, University of Kalyani.
27. Prof. Somnath Bhattacharya selected as Member, Board of Research studies/Academic council Department of Botany, WBSU, Barasat.
28. Prof. Somnath Bhattacharya selected as Member, Evaluation Committee, Institute award for the best scientist, ICAR-CRIJAF, Barrackpore.
29. Prof. Somnath Bhattacharya selected as Member, Research Advisory Committee RAC, National Tea Research Foundation, India.
30. Prof. Somnath Bhattacharya selected as Member, Research Advisory Committee (RAC), Central Sericulture Research and Training Institute, Berhampore, India.
31. Dr. Soumen Bera received "Young Scientist Award, 2020" from Crop and Weed Science Society, BCKV, Mohanpur, West Bengal.
32. Prof. Subhra Mukherjee selected as Member, Executive Body, Indian Natural Fibre Society, ICAR-NINFET, Kolkata.

33. Prof. Subhra Mukherjee has been nominated as “Members of Board ofo Studieis”, Department of Genetics and Plant Breeding, PSB, Visva Bharati, Sriniketan.
34. Dr. Subrata Dutta acted as the expert member for the revision of syllabus and NSQF alignment of vocational courses in Agriculture discipline of WBSCT and VE and SD West Bengal.
35. Dr. Sunil Kr. Ghosh received –“Research Excellence award -2020” conferred by Institute of Scholars a society in Bangaluru, Karnataka.
36. Dr. Sunil Kr. Ghosh received – “Eminent Scientist Award-2020” conferred by Samagra Vikash Welfare Society (SVWS), Lucknow, on World Environment Day, 5th june, 2020 celebration.
37. Dr. Sunil Kr. Ghosh received Award for “Innovative Research and Dedicated Educationalist in Agricultural Entomology-Oct., 2020” conferred by the SIESRP--Chennai, accredited by- Malaysia.
38. Dr. Sunil Kr. Ghosh received “Fellowship Award by ‘Scientific Society of Advanced Research and Social Change” New Delhi, India.
39. Dr. Sunil Kr. Ghosh received “Fellowship Award” by Global Environment and Social Association (GESA), New Delhi, India.
40. Dr. Sunil Kr. Ghosh received “Fellowship Award” by Scholars Academic and Scientific Society (SASS), Borhawar, Murajhar, Hojau, Assam, India.
41. Dr. Sunil Kr. Ghosh received “Fellowship Award” by Society for Biotic and Environmental Research (SBER), Khowai, Tripura, India.
42. Dr. Susanta Kr. Pal is nominated as an external member of the BOS of the department of Soil Science and Agricultural Chemistry, Palli Siksha Bhavana, Visva-Bharati.
43. Dr. Susanta Kr. Pal is nominated as the External Member of Faculty Council of Uttar Banga Krishi Viswavidyalaya, Pundibari, Cooch Behar.
44. Mr. Raghunath Mondal received “Overseas Excellence Studentship Award 2019-22” awarded by Royal Holloway University, London.
45. Prof S. Chakrabarty is acting as Chairman of the Expert Committee on Agriculture under the Department of Higher Education, Science and Technology and Biotechnology, Govt. of West Bengal since 2017.
46. Prof. A. B. Sharangi has been awarded with “Bharat Ratna Mother Teresa Gold Medal Award in 2020”.
47. Prof. A. B. Sharangi has been nominated as the Fellow of the International Society for Noni Science in 2020.
48. Prof. A. B. Sharangi has been selected as the Certified Publons Academy Peer Reviewer (Publons Academy Graduate, Clarivate-Web of Science, 2020).
49. Prof. A. B. Sharangi has been selected as the Expert Reviewer for the Books of the Springer Nature (USA), CRC (Taylor & Francis, USA), Bentham (China), etc.

50. Prof. A. Bhattacharya acted as a resource person of ASRB, New Delhi.
51. Prof. A. Pariari has been nominated as the Zonal Convenor for Eastern Region of Indian Society for Spices, Kuzhikode, Kerala.
52. Prof. B. N. Panja acted as External Examiner for the recruitment of Associate Scientist (Agriculture) and Scientific Assistant (Agriculture) in ISI, Kolkata/Giridih, Jharkhand.
53. Prof. M. K. Nanda has been selected as an expert member for the R and D project evaluation Committee on Earth Sciences including Geoinformatics of the Department of Science and Technology and Biotechnology, Govt. of West Bengal.
54. Prof. M. K. Nanda has been selected as an expert member of the Institute Research Council of National Rice Research Institute, Cuttack
55. Prof. P. K. Sahu attended CAFT progrmme in 2020 on Statistical and Machine Learning Techniques for Modeling and Forecasting Agricultural Data as a resourse person at ICAR-IASRI, New Delhi.
56. Prof. P. K. Sahu attended winter school in 2020 on Data Analysis in Agriculture using Statistical Software Packages as a resourse person at ICAR-IASRI, New Delhi.
57. Prof. S. Banerjee has been selected as an expert in Selection Committee for selecting the SMS (Agromet) of KVK, Burdwan.
58. Prof. Sankar Kr Acharya Chaired a Session and delivered a lecture in National Seminar on "Ecology, Biodiversity and Health: Application and Strategy" held in the year 2020 organised by Raja Narendra Lal Khan Women's College, Midnapur, West Bengal.
59. Prof. Susanta Kumar De received "National Fellow Award- 2020", conferred by the Soil Conservation Society of India.
60. Prof. U. Thapa participated as a Chairperson in two days National Webinar on Role of Rootstock in Fruit and Vegetable Crops for Improving Yield and Quality during 4-5th July, 2020 organised by SAAHAS, Allahabad.

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

1. Prof. A. B. Sharangi delivered an invited Key Note lecture in a*National e-Conference* at SGVU (*Suresh Gyan Vihar* Prof. A. B. Sharangi *University*), Rajasthan, India in 2020.
2. Prof. Pranab Hazra delivered Key Note Address on "Biodiversity and Sustainable Nutrition with reference to Tomato, Brinjal and Potato" in the International Web Conference on "Biodiversity in Vegetable Crops for Healthier Life and Livelihood" during 27-28 August, 2020 at Bihar Agricultural University, Sabour, Bhagalpur, Bihar.
3. Dr. Abhijit Kr. Nandi delivered invited lecture on " History and genesis of agricultural education in India" in Agricultural Economics and Social Science Research Association conference on "Emerging agricultural research to endure the predicament of Covid-19 pandemic", at Viswa-Bharati, December, 2020.
4. Dr. AmitabhaBanerjee delivered keynote lecture at National Webinar on "Sustainable pest management of organic banana: need of climate smart agriculture" organized by Sabour, Bhagalpur held on 31 August, 2020.
5. Dr. Amitabha Banerjee delivered keynote lecture at National Webinar on "Modern tools and techniques for doubling pulses and oilseeds production" organized by College of Agriculture, Tripura held on October 16-17, 2020.
6. Dr. B. Chakraborty delivered an invited talk in Webinar on "Sensor and advanced data acquisition system" organized by Maulana Abul Kalam Azad University, Kolkata on 18th June, 2020.
7. Dr. J. Dutta attended international virtual workshop on 'COVID 19: RT-PCR Diagnosis and Therapeutics' from 5th – 7th August, 2020 organized by University of Kalyani in collaboration with C0M- JNM Hospital, Nadia, West Bengal.
8. Dr. J. Dutta attended International Webinar on "Strengthening the Immune System against COVID-19 through Agricultural Innovations" organized by S.K.N. Agriculture University, Jobner - Jaipur) on July 29,2020.
9. Dr. Kusal Roy has delivered Invited Key Note Lecture on "The Push Pull Strategy: An eco-friendly approach for management of Fall Armyworm" in National Webinar on Challenges and Recent Initiatives on Sustainable Management on Fall Armyworm organized by the Bihar Agricultural University, Sabour, Bhagalpur (Bihar) on 16th July, 2020.
10. Dr. Soumitra Chatterjee delivered a Lead Lecture on "Current Trends in Pulses and Oilseeds Production in India" by in National Webinar on" Modern Tools and Techniques for doubling the Pulse and Oilseed Production" organized by Department of Agronomy, College of Agriculture Tripura.
11. Dr. Subrata Dutta delivered Invited Lecture in the International Symposium on "Nature, Microbes and Society" held at Kolkata, February, 6- 8, 2020.

12. Dr. Sunita Mahapatra delivered Lead Lecture in Paase Conference on “Perspective on Agricultural and Applied Sciences in COVID-19 Scenario (PAAS-2020)” October 4-6, 2020.
13. Prof S. Chakrabartyacted as Co-Chairperson for the Technical Programme Formulation Committee on ‘Post-Harvest Technology and Value Addition’ at coordinated centres for the XXIX Annual Group Meeting of AICRP on Floriculture has been scheduled during December 14-17, 2020.
14. Prof. Amitava Basu (2020) attended 7th IPS Coonference 2020 as Invited speaker held at New Delhi, ICAR-IARI, January 16-20, 2020.
15. Prof. F. K. Bauri participated for GD of ICAR-AICRP on Fruits at Panjab Agricultural University, Ludhiana, Punjab, 16 - 19 February, 2020.
16. Prof. M. K. Nanda acted as resource person in the on-line training program on “Advanced Course in Geoinformatics: Machine Learning in Geoinformatics” organized by Department of Science and Technology and Biotechnology, Govt. of West Bengal.
17. Prof. M. K. Nanda delivered Invited Special Lecture on “Application of Geoinformatics in Agriculture and Drought Evaluation” for the PG Diploma and M.Tech. students of Department of Science and Technology and Biotechnology, Govt. of West Bengal.
18. Prof. M. K. Pandit delivered Key Note Address in the State level seminar on “The Himalayas and the Indian society under the changing climate scenario” organized by JIS group of colleges on 09.09.2020.
19. Prof. Pranab Hazra acted as Co-Chairman of the session “Hybrid Evaluation” in the workshop of All India Coordinated Vegetable Improvement Project held during 25-27 September, 2020.
20. Prof. Pranab Hazra delivered invited lecture on “Antioxidants and health benefits of brinjal” in the Prof. Brahma Singh Horticulture Foundation webinar series on “Vegetables for nutrition and entrepreneurship” on 12 December, 2020 at New Delhi.
21. Prof. Pranab Hazra delivered Invited Lecture Future vegetables and new generation hybrids in the National level Web Conference on “Challenges and opportunities in vegetable production in the warm humid tropics” during 11-13 November, 2020 at Kerala Agricultural University.
22. Dr. J. Dutta attended online national faculty development programme on "Assessment and Evaluation in Higher Education" from July 27 -31, 2020 organized by IISER Bhopal.
23. Prof. Abhijit Kr. Nandi presented a paper entitled "Income and employment of age-old landless in Jalpaiguri District of West Bengal" in Global conference on “Emerging agricultural research to endure the predicament of Covid-19 pandemic” held on 21st December, 2020,Organized by AESSRA at Viswa-Bharati University.
24. Dr. Anita Roy presented a paper in International web conference on FSSA, VAKSANA held in September, 2020, on the topic “Study of variability and storage protein content in Urdbean (*Vigna mungo*)”.

25. Dr. Anita Roy presented a paper in webinar, held in August 2020 on “International web conference on biodiversity in vegetable crops for healthier life and livelihood" organized by BAU.
26. Dr. Arpita Das participated in the international online workshop on “Application of statistics in science and technology using SPSS” from August, 08-10, 2020, organized by the World Food Preservation Center, USA.
27. Dr. Arpita Das participated in the international webinar on "Women in science and their role in sculpting modern agriculture" held on August 26, 2020, organized by BAU, Sabour, Bhagalpur.
28. Dr. Arpita Das participated in the international webinar on “Advances on rice researches for food safety and environmental sustainability” held on 13th August, 2020, organized by Tamil Nadu Rice Research Institute, TNAU.
29. Dr. C. Karak and Prof. U. Thapa participated in international webinar on Hi-Tech horticulture: the sunrise sectoron, 7th October, 2020 organized by BCKV, Mohanpur, Nadia, West Bengal.
30. Dr. C. Karak participated in international webinar on “Harnessing the potential of tropical tuber crops under changing climate” on 27th October, 2020 organized by ICAR- CTCRI, Sreekariyam, Thiruvanthapuram, Kerala.
31. Dr. C. Karak participated in international webinar on “Strengthening the Immune System against Covid-19 through Agriculture Innovations” on July 29, 2020 organized by College of Agriculture, SKNAU, Fatehpur-Shekhawati, Sikar, Rajasthan.
32. Dr. C. Karak participated in national webinar on “Underutilized crops for augmenting farmers’ income in abiotic stress region” organized by ICAR-NIASM and SARAS, Baramati, Pune, Maharashtra on August 10, 2020.
33. Dr. C. Karak participated one day international webinar on Innovation and advances in plant science organized by the Department of Botany in collaboration with IQAC, Balarampur College, Purulia, West Bengal held on 21st Nov., 2020.
34. Dr. C. Karak, Dr. P.K. Takhur and Prof. U. Thapa participated in international symposium (Online) on “Food security and the stand of civilization: agri-horti-livestock dynamics in changing global ecology in support of united nations SDG Goal-2: zero hunger on 20th and 21st September, 2020 organized by BCKV in Colaboration with Lincoln University College, Malaysia, University of Bengkulu, Indonesia.
35. Dr. D. Hazra attended five days (March 15-19, 2021) virtual training on “Bioprospecting of natural resources for the production of biopesticide” organized by the Division of Agricultural Chemicals, ICAR-IARI, New Delhi.
36. Dr. Kanu Murmu attended international webinar (2020) on “Climate Smart Agriculture” CAAST, NAHEP, ICAR Rahuri.
37. Dr. Kanu Murmu attended international webinar (2020) on “Plant physiological paradigms towards agricultural sustainability under climate change" MBAC, Agwanpur, Saharsa, BAU, Sabour.

38. Dr. Kanu Murmu attended national webinar (2020) on “Domestic plant health, promote export” organized on the eve of International Year of Plant Health (IYPH2020) at NIPHM, Hyderabad.
39. Dr. Kanu Murmu attended online seminar on "Paradigm shift in mechanization for futuristic agriculture" organized by Centre for Agricultural Market Intelligence, AAU, Anand on 16th December, 2020.
40. Dr. Koushik Batabyal attended ICAR sponsored 21-days summer school programme on “Organic Agriculture and Soil Health” held on 20th February to 11th March, 2020, organized by Assam Agricultural University, Jorhat, Assam.
41. Dr. Kusal Roy attended one day (09th October, 2020) online training programme on “Integrated Pest Management for Maize Crop with Special Reference to Fall Armyworm” organized by the FAO India, ICAR-Indian Institute of Maize Research (IIMR), Ludhiana.
42. Dr. Kusal Roy attended one day (1st October 2020) 16th Annual Conference of Crop and Weed Science Society (CWSS).
43. Dr. Kusal Roy attended two days (August 6-7, 2020) webinar on “Host-microbe interactions: present and future perspectives” organized by the School of Biotechnology, Department of Life Sciences, Presidency University, Kolkata.
44. Dr. Md. Nasim Ali presented a paper in a national webinar on “Plant biological interventions for climate smart agriculture” held on 30th July, 2020, organized by BAU, Sabour, Bhagalpur.
45. Dr. Md. Nasim Ali participated in Kosambi International Webinar series on “Plant Genomics” held on 31st July to 2nd August, 2020 organized by Department of Botany, SPPU, Pune.
46. Dr. P.K. Thakur attended the International Webinar on “Recent trends in processing technologies for food quality and safety” on 20th July, 2020 organized by the Bihar Agricultural University, Sabour, Bhagalpur, Bihar.
47. Dr. Poly Saha attended the national seminar on “Advancement of biotechnology in human welfare” on 24th February, 2020 at Suresh Neotia Centre of Excellence for leadership, Salt Lake, Kolkata.
48. Dr. Poly Saha participated in the six days virtual international virtual conference on “Current advances in rice blast research” National Institute of Technology Durgapur, 1-5 December, 2020.
49. Dr. Poly Saha participated in the two days Webinar “Host-microbes interactions: present and future perspectives” organised by School of Biotechnology and department of Life Sciences, University of Presidency, Kolkata, 6-7 August, 2020.
50. Dr. R. Karmakar and Dr. D. Hazra attended 28th Annual Workshop of AINP on pesticide residues, on 23rd July, 2020 through Webinar.

51. Dr. Rajib Kundu attended online International training course on “Perspectives of present and future weed research under climate smart agriculture” during August17-20, 2020 organized by the CAAST, MPKV, Rahuri, Maharashtra.
52. Dr. Raju Das attended National conference on ‘Contribution of Dr. B. R. Ambedkar to modern India’, organized by SC, ST, OBC Employees Welfare Association of Visva-Bharati at Visva-Bharati, Santiniketan on February 1-2, 2020.
53. Dr. Raju Das attended International Symposium On “Nature, microbes and society”, during 6-8th February, 2020 organized by IMS, Department of Botany, C.A., Kolkata, West Bengal.
54. Dr. S. Chatterjee attended 28th Annual Conference of the AERA during 16-18 December, 2020, organized by Agricultural Economics Research Association (AERA), Pusa, New Delhi.
55. Dr. Sanchita Mondal and Dr. Srijani Maji attended international training entitled “Conservation Agriculture based Crop Management Technologies in Climate Smart Agriculture” during 18-22 May, 2020 organized by the CAAST under the World Bank aided NAHEP of the ICAR, New Delhi.
56. Dr. Sanchita Mondal and Dr. Srijani Maji attended National Webinar on “Challenges, Opportunities Future of Agri and Allied Research and Education: Post CovidEra” conducted by All India Agricultural Students Association from 30th – 31st May, 2020.
57. Dr. Sanchita Mondal and Dr. Srijani Maji attended online workshop on "Climate Change: Management Strategies for Doubling the Farmers Income" during 12-16 May, 2020 organized by MTTC, VTC, CAU, Lembucherra, Tripura West, Tripura.
58. Dr. Sanchita Mondal attended virtual training on “How to be an effective peer reviewer” on 29th April 2020, organized by the Taylor and Francis Group.
59. Dr. Sonali Biswas attended 21 Days Online National Training on “Technology interventions towards transformation agriculture, sericulture, animal husbandry and allied sectors into sustainable enterprises for atmanirbhar Bharat” during 11th to 31st October, 2020 organized by the AEDS, CSRTI and Bioved Research Institute of Agriculture, Technology and Sciences, Prayagraj, Allahabad.
60. Dr. Sonali Biswas attended online short course on “Precision Agriculture: A Technology for Income Augmentation and Entrepreneurship Development” during 7-18, July, 2020 organized by the College of Fisheries, CAU, Lembucherra, Imphal. Tripura.
61. Dr. Sonali Biswas attended training programme on ‘Integrated pest management for maize crop with special reference to fall armyworm in Eastern India’ on 9 October 2020, organized by the FAO, India and ICAR-IIMR.
62. Dr. Soumitra Chatterjee presented a paper in National Webinar on “Economic impact assessment of conservation agriculture on small and marginal farm households in eastern India” during 16-18 December, 2020, organized by AERA, Pusa New Delhi.

63. Dr. Sudeshna Mondal participated in the National Webinar on Agrochemicals for upkeeping environment" held on August 27, 2020, organised by Society for Fertilizers and Environment in collaboration with BCKV, Mohanpur.

64. Dr. Sujit K. Ray presented a paper in the International Symposium on "Nature, Microbes and Society" held at Kolkata, February, 6- 8 ,2020.

65. Dr. Sujit K. Ray presented paper in the 7th International Conference on "Phytopathology in Achieving UN Sustainable Development Goals" held at ICAR-IARI, New Delhi, January 16-20, 2020.

66. Dr. Sushanta Saha participated in National Seminar in virtual mode on "Agrochemicals for upkeeping environment" held on August 27, 2020, organised by Society for Fertilizers and Environment in collaboration with the BCKV, Mohanpur.

67. Dr. Sushanta Saha participated in the International webinar on "Soil spectroscopy: an emerging technique for rapid soil health assessment" ICAR-Indian Institute of Soil Science, Bhopal and World Agroforestry (ICRAF), Nairobi during 1st October, 2020.

68. Dr. Sushanta Saha participated in the National webinar on "Recent advances in soil microbiological research with a special thrust to biofertilizer technology" held on 25th August, 2020 organized by BAU, Sabour, Bhagalpur.

69. Dr. Tapan K. Mandal participated in virtual mode of the Conference (21 days) on 'Technology Interventions towards transformation of agriculture, sericulture, animal husbandry and allied sectors into sustainable enterprises for Atmanirbhar Bharat" from 11th to 31st October, 2020 organised jointly by AEDS (UP), CSRTI, Mysore, Karnataka, Allahabad and Pondichary Inst. of Agril. Sci.

70. Dr. Tapan Kr. Mandal participated in virtual mode in International Webinar on 'Hi-tech Horticulture: Sunrise Sector' organized by BCKV.

71. Dr. Tapan Kr. Mandal participated International webinar in virtual mode on "Drone remote sensing in agriculture" held on 2020 organized by Indian Society of Agro-Physics and Division of Agril-Physics, ICAR, New-Delhi.

72. Dr. Tapas K Chowdhuri attended a seminar on "Harnessing the potential of indigenous ornamentals" on 18th June,2020, Org by :Horticulture Science Division, ICAR, New Delhi and DFR-ICAR, Pune, Maharastra.

73. Prof. A .Pariariattended Annual Group meeting (virtual) of ICAR-AICRP on Spices as Principal Investigator organised by AICRP on Spices, IISR, Kozhikode, Kerala during 28-30, September, 2020.

74. Prof. A. B. Sharangiorganized International Webinar on "Hi-Tech Horticulture: A Sunrise Sector" on October 7 2020, BCKV, India.

75. Prof. A. Pariari organized a symposium (online) on "Food security and stand of civilization : agri- livestock dynamics in changing global ecology" during 20-21, September 2020 on behalf of the BCKV in collaboration with Lincoln University College, Malaysia & University of Bengkulu, Indonesia.

76. Prof. A. Pariari organized an International Webinar on " Environment in 2020: Vision and Mission" on July 12, 2020 under the banner of NSS unit, BCKV, India in collaboration with Faculty of Science, Lincoln University College, Malaysia.
77. Prof. A. Pariariorganized an Workshop on "Advancement in research and development of plantation, spices, medicinal and aromatic crops:2020 and vision 2030" on 30th August 2020 on behalf of the department of PSMA, Faculty of Horticulture, BCKV, Mohanpur.
78. Prof. K Bramhachri organized one day (23.03.2021) training entitled "Cropping system intensification through integration of different components in coastal zone of West Bengal".
79. Prof. M. Ghosh attended 1st Indian Rice Congress' organised by Association of Rice Research Workers, ICAR-National Rice Research Institute, Cuttack, Odisha during 8-9 December, 2020.
80. Prof. M. Ghosh attended National Webinar on 'Sustaining organic farming during and post COVID 19' organized by Central Agricultural University, Ranipool, Sikkim during 4-6 August, 2020.
81. Prof. M.A. Hasan participated in 107th Indian Science Congress and presented paper on "Cultivation of dragon fruit for socio-economic upliftment of rural people", during January 3-7, 2020 at UAS, Bangalore.
82. Prof. N. Chattopadhyay attended International Webinar on "Environment in 2020: Vision and Mission" conducted on July 12, 2020 organized by NSS unit BCKV in collaboration with Faculty of Science, Lincoln University College, Malaysia.
83. Prof. K. Karmakar and Prof. N. Chattopadhyay attended National Workshop on "Advancement in Research and development of Plantation, Spices, Medicinal and Aromatic Crops:2020 and vision 2030" organized by Department of PSMA, Faculty of Horticulture, BCKV, Mohanpur on 30th August 2020.
84. Prof. P. Datta participated in the Webinar on Hi-tech Horticulture: The sunrise sector, organized by the Faculty of Horticulture, BCKV on 7th October 2020.
85. Prof. S. Chakrabarty attended XXIX Annual Group Meeting (Virtual) of AICRP on Floriculture on December 14-17, 2020 by the Directorate of Floriculture, ICAR.
86. Prof. S. K. Acharya delivered talk series of the topic "Mind Training for the Youth under Stress (COVID-19)" at college of Agriculture, CAU Imphal.
87. Prof. S. K. Acharya presented a paper in National Webinar on "Agrochemicals for upkeeping environment" held on August 27, 2020, organized by Society for Fertilizers and Environment BCKV, Mohanpur, Nadia, West Bengal.
88. Prof. Surajit Mitra organised an International Webinar on "Fruits, vegetables and tropical tubers in shaping global food and nutrition security" in collaboration with the Institute of General and Physical Chemistry, Belgrade, Serbia on 12th November, 2020.

89. Prof. U. Thapa participated a Webinar on "Nutritional Enhancement of vegetable crops with major emphasis on Broccoli- a new cole crop in India" organised by Brahma Singh Horticulture Foundation, New Delhi, during 2nd October, 2020.

90. Prof. U. Thapaparticipated a Webinar on Greenhouse/ Net house/Tunnel on 22nd August, 2020, organized by Agriplast Tech India Private Limited, Hosur Panchay at Union and Taluk, Tamil Nadu.

91. Prof. U. Thapa participated as a speaker on two days National Webinar on Hi-tech Horticulture on 16-17th, May, 2020 organized by the Society of Advancement in Agriculture, Horticulture and Allied Sectors, SAAHAS, Allahabad.

92. S. Patar, R. Kumar, K Kundu, S. Jash and R. Das attended International Symposium on "Nature, Microbes and Society" organized by the Indian Mycological Society, Department of Botany, University of Calcutta on 6-8 February, 2020 at Kolkata.

93. Dr. Hirak Banerjee acted as resource person in a topic "Cultivation practices of jute including different fibre retting process" at Sasya Shyamala KVK, Sonarpur, Kolkata MANAGE, Hyderabad 26.08.2020.

94. Dr. Hirak Banerjee acted as resource person in a topic "Cultivation practices of potato including the processing aspect" at Sasya Shyamala KVK, Sonarpur, Kolkata organized by MANAGE, Hyderabad 02.09.2020.

95. Dr. Hirak Banerjee acted as resource person in a topic "Cultivation practices of hybrid maize and baby corn" at Sasya Shyamala KVK, Sonarpur, Kolkata organized by MANAGE, Hyderabad 03.09.2020.

96. Dr. Hirak Banerjee acted as resource person in a topic "Water conservation/ rainwater harvesting and natural resource management for dryland agriculture" at Sasya Shyamala KVK, Sonarpur, Kolkata MANAGE, Hyderabad 27.08.2020.

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3.	Dr. R. Ray	Professor	atneswarbckv@gmail.com	9432363108
4.	Dr. S. Panda	Assit.Prof.	subhabratapanda@gmail.com	9163734922
16. Department of Animal Science				
1.	Dr. C. K. Biswas	Prof. & Head	biswasck42@gmail.com	7980157477 9432850040
2.	Dr. S. Datta	Professor	drsubhendudatta@ rediffmail.com	9477352477
3.	Mrs. A. Biswas	Asst. Professor	biswasanupa1985@gmail.com	7557074751

SN	Name of the Teacher	Designation	Email	Contact No
College of Agriculture, Bardhaman				
1.	Dr. D. K. Ghosh	Prof. & Associate Dean	drdipakghosh08@gmail.com	9433947041
2.	Dr. H. Jana	Assist Prof., Agril. Extn. Education	janahiralal@yahoo.in	9735164659
3.	Dr. S. Saha	Asst. Prof., Soil Science	susmit_saha1984@rediffmail.com	9804877984
4.	Dr. L. C. Patel	Asst Prof., Entomology	lakshman_patel@rediffmail.com	9679697632
5.	Dr. J. Datta	Asst Prof., Biochemistry	jhumadatta12@gmail.com	9434948824
6.	Mr. S. N. Mandal	Asst. Prof., Genetics and Plant Breeding	snmandaledu@gmail.com	946716758
7.	Dr. S. Bera	Asst. Prof., Agronomy	soumen.bckv@gmail.com	9476198127
8.	Dr. P. Saha	Asst. Prof., Pl. Pathology	poly.saha@gmail.com	9434586429
9.	Dr. S. Das	Asst Prof., Horticulture	das.sibsankar123@gmail.com	9903126538
10.	Er. S. Hensh	Asst Prof, Agril. Engineering	s.hensh1986@gmail.com	9475207072
College of Agriculture, Bankura				
1.	Dr. P. K. Patra	Professor & Associate Dean	drpatrapk@yahoo.co.in,	9007578684
2.	Mr. B. Das	Asst. Prof., Ag. Engineering	bidyutdas613@gmail.com	9932403213
3.	Mr. M. Mondal	Asst. Prof., Plant Pathology	mrinmoy.bckv@rediffmail.com	9038144192
4.	Dr. P. Rai	Asst. Prof., Entomology	pranayraibckv@gmail.com	9932252894
5.	Mr. S. Bairagi	Asst. Prof., Horticulture	snbdumdum@gmail.com	7319489756
6.	Dr. S. Mal	Asst. Prof., Soil Science	smsujitmal@gmail.com	9434013657
7.	Dr. A. Hansda	Asst. Prof., Agronomy	hansda.anita@bckv.edu.in	9474690936
8.	Dr. S. Shil	Asst. Prof., Pl. Physiology	sanjoycrijaf@yahoo.co.in	9932382691
9.	Dr. T. Biswas	Asst. Prof., Genet. and Plant Breeding	biswasgpb@gmail.com	8768321559
10.	Mr. T. S. Murmu	Asst. Prof., Agril.Ext. Education	tmurmu78@gmail.com	9474165391

Faculty of Horticulture, Mohanpur

SN	Name of the Teacher	Designation	Email	Contact No
1. Department ofFruit Science				
1.	Dr. S. Kundu	Prof. & Head	skundubckv@gmail.com	9433307627
2.	Dr. P. Datta	Professor & Dean, F/Hort.	pallab_bckv@rediffmail.com	9433565299
3.	Dr. S. K. Sarkar	Professor	sks_bckv@rediffmail.com	9432167495
4.	Dr. Md. A. Hasan	-Do-	profmahasan@gmail.com	9433387586
5.	Dr. F. K. Bauri	-Do-	fmpr.bauri@gmail.com	9433678461
6.	Dr. K. K. Mandal	-Do-	kamalmosambi@gmail.com	8420142067
7.	Dr. K. Chakraborty	-Do-	drkalyanchakraborti@rediffmail.com	9339218744
8.	Dr. S. Debnath	Asst. Prof.	sdbckv@gmail.com	9932397334
9.	Dr. D. Majhi	Asst. Prof.	drdebalina.bckv.fruits@gmail.com	9007902376
2. Department ofVegetable Science				
1.	Dr. M. K. Pandit	Prof. & Head	mkumarpandit@yahoo.com	9433342127
2.	Dr. P. Hazra	Professor	hazra.pranab05@gmail.com	8910782815
3.	Dr. A. R. Mandal	-Do-	amitmandal_vegbckv@rediffmail.com	9831125638
4.	Dr.U. Thapa	Prof. & DEE	drumesh.thapa@gmail.com	9830234577
5.	Dr. S. B. Chattopadhyay	Professor	sbc_veg@rediffmail.com	9432502081
6.	Dr. A. Chattopadhyay	-Do-	chattopadhyay.arup@gmail.com	9239402700
7.	Dr. P. Choudhuri	Asso. Prof.	partha2909@rediffmail.com	9434197827
8.	Dr. C. Karak	Assit. Prof.	todrck@gmail.com	9475584479
3. Department ofFloriculture and Landscape Architecture				
1.	Dr. S. S. Gantait	Asso. Prof. & Head	ssgflori@gmail.com	9836265918
2.	Dr. M. Mitra	Professor	mmitra100@yahoo.com	7980151196
3.	Dr. A. K. Pal	-Do-	drpal_bckv@rediffmail.com	9432734679
4.	Dr. T. Mandal	-Do-	tmbckv@gmail.com	7003873020
5.	Dr. T. K. Chowdhuri	Asso. Prof.	tkc.hort@gmail.com	9474618964
6.	Dr. J. Majumder	Asst. Prof.	jayotisarkar1@gmail.com	8478095519
4. Department ofPlantation, Spices, Medicinal and Aromatic Crops				
1.	Dr. A. Pariari	Prof. & Head	dranupariari@gmail.com	9477156733
2.	Dr. J. K. Hore	Professor	jkhore31@rediffmail.com	9477473506
3.	Dr. A. Bandyopadhyay	-Do-	apurba.bandyopadhyay@gmail.com	9432230746
4.	Dr. N. Chattopadhyay	-Do-	dr_ncspc@rediffmail.com	9433614472
5.	Dr. A. B. Sharangi	-Do-	profabsbckv@gmail.com	9433313117
6.	Dr. D.K. Ghosh	-Do-	drdipakghosh08@gmail.com	9433947041
7.	Dr. (Mrs.) M. Poduval	Asso.Prof.	poduval.mini@ bckv.edu.in	8918137182
8.	Dr. D.K. Ghosh (LKN)	-Do-	dipakkumarghosh62@gmail.com	9434718565
5. Department ofPost Harvest Technology				
1.	Dr. S. Mitra	Prof. & Head	drsurajitmitra@yahoo.co.in	9433513560
2.	Dr. A.K. Banik	Professor	banikasispht@gmail.com	9830174596
3.	Dr. I. Chakrabarty	-Do-	ivcpht@gmail.com	8697318710
4.	Dr. S. Chakrabarty	-Do-	suhritakvk@gmail.com	9831237309
5.	Dr. P. K. Thakur	Asst. Prof.	pranbckv@gmail.com	7003466218

Faculty of Agricultural Engineering, Mohanpur

SN	Name of the Teacher	Designation	Email	Contact No.
1. Department of Farm Machinery and Power				
1.	Dr. P. S. Chattopadhyay	Professor & Head	pschattopadhya@yahoo.com	9903406877
2.	Dr. S. Karmakar	Professor	skarmakar.bckv@gmail.com	9903614298
3.	Dr. D. Saha	Asso. Professor	dsaha62@yahoo.co.in	9432259894
4.	Er. S. Hensh	Asst. Professor	s.hensh1986@gmail.com	9475207072
2. Department ofFood Engineering				
1.	Er. S. Saha	Asso. Prof.&Head	soumen_sh@yahoo.com	9831309128
2.	Dr. P.K. Sahoo	Professor	pks03@rediffmail.com	8902348196
3.	Dr. M.K. Chourasia	-Do-	mkchourasia3@rediffmail.com	9434217901
3. Department of Post Harvest Engineering				
1.	Dr. S. Mukherjee	Professor & Head	souti62@rediffmail.com	9836991461
2.	Dr. B. Chakraborty	Asst. Professor	badal.chakraborti@gmail.com	9433791697
3.	Dr. A. Karmakar	-Do-	karmakar.ani@gmail.com	9775188797
4.	Er.K. Dhali	-Do-	king.info@gmail.com	9674615918
4. Department of Soil and Water Engineering				
1.	Dr. A. Chowdhury	Assist. Prof. & Head	alivia@rediffmail.com	9434205986
2.	Er. Bidyut Das	Assistant Professor	das.bidyut@bckv.edu.in	9932403213

Details of Financial Progress of Development Grant

Budget 2020-21: Budget of Bidhan Chandra Krishi Viswavidyalaya for 202-21

Sl. No.	Source A. Head	(Rs. In Lac.) Actual Receipt 2020-21
1	Main Campus (including Bardhaman and Bankura College)	12639.38
		12639.38
	Total (Non Plan)	
1	AICRP 25% of State Share	73.14
2	State Ad-hoc Project	98.63
3	RIDF Projects	779.62
4	RKVY	226.64
5	Training Programme	14.80
	Total (Plan)	**1192.83**
	Total A (Non Plan + Plan)	
	B.	
1	ICAR 75% share of AICRPs and AINPs	1163.51
2	ICAR Ad-hoc Projects 100%	218.17
3	Development Grant (ICAR)	187.19
4	KVKs (Howrah, Hoogly, Nadia) 100%	803.86
5	Mega Seed Project (Including Revolving Fund)	46.37
	Total (B)	**2419.10**
	C.	
1	Grants received from the Govt. of India on Comprehensive scheme 100% Plan	307.00
2	Grants received from Govt. of India on Agromet Advisory Service 100% Plan	28.39
3	Grants Received from the Govt. of India on Ad-hoc Schemes 100%	140.94
4	RNARC	9.06
	Total (C)	**485.39**
	D.	
1	Private/Corporate Projects	659.12
2	Seminer, Workshop and Training	11.02
	Total (D)	**670.15**
	E.	
1	Internal Resource Generation	730.28
	Total (E)	**730.28**
	Total (A+B+C+D+E)	**18137.13**

Sl. No.	Name of Units	(Rs. In Lac) Actual Expenditure for 2020-21
A.	**Non Plan (Govt. of West Bengal)**	
	Grant-in Aids (Mohanpur, Burdwan and Bankura)other than Retirement benefits	13313.65
	Retirement Benefits	150.78
	TOTAL :- A	**13464.44**
B.	**Plan (Govt. of W.B)**	
1	All India Co-ordinated Research Project (25%)	358.71
	College of Agriculture at Bardhaman	47.85
	College of Agriculture at Bankura	8.98
4	State Ad-hoc Schemes (100%)	97.30
5	RIDF Projects	780.61
6	RKVY	336.33
7	Training Programme	2.14
	TOTAL :- B	**1631.93**
	Non-plan and Plan (Govt. of W.B.):	
C.	**Plan (I.C.A.R. Projects)**	
1	All India Co-ordinated Research Project (75%)	1111.43
2	KVK, Nadia, Hooghly, Howrah (100%), Purba Medinipur ICAR	799.57
3	ICAR Ad-hoc Schemes 100%	527.64
4	Mega Seed Project	39.85
	TOTAL :- C	**2478.49**
D.	**Govt. of India Plan**	0.00
1	Comprehensive Scheme (100%), Govt. of India	255.43
2	Agromet Advisory Serv. (100%), Govt. of India	27.64
3	Govt. of India Ad-hoc Schemes (100%)	177.26
4	RNARC Projects	15.87
	TOTAL :-D	**476.19**
E.	**I C A R Development Grant**	236.81
	Private/Corporate Projects	683.91
	Seminer, Workshop & Training	18.22
	TOTAL :-E	938.94
	GRAND TOTAL (A+B+C+D+E)	**18989.99**

Report of Nodal Cell

Financial year of report: 2020-21

Name of the Vice Chancellor along with his Date of Joining: Prof. B.S. Mahapatra 14th Dec., 2020

Whether present Vice Chancellor is permanent or acting : Permanent

Year of establishment: 1974

Details of the Nodal Officer : Prof. Manoj Kr. Nanda**,** Department of Agricultural Meteorology and Physics, Faculty of Agriculture, +91 8777678487, nodaloff.bckv@gmail.com

Brief Introduction along with mandate and objective of the university :

The Bidhan Chandra Krishi Viswavidyalaya, established in 1974 vide West Bengal Act XLIS of 1974, has already completed more than four decades of its existence as the pioneer seat of agricultural education, research and extension. The university offers UG, PG and doctoral programmes. All the three teaching faculties namely, faculty of agriculture, Horticulture and agricultural engineering offer 4-years under graduate degree programme leading to the degree of B.Sc. (Hons.) Agriculture, B.Sc. (Honours) Horticulture and B. Tech. (Ag. Engg.). There are 25 departments distributed over the three faculties of which 16 falls under the Faculty of Agriculture, 5 under the Faculty of Horticulture and 4 under the faculty of agricultural engineering. While all the aforesaid departments offer UG and Doctoral programme, master degree courses are being offered from 24 departments. The intake capacity for UG studies across the faculties of agriculture (including Burdwan and Bankura extended campus), horticulture and agril. engineering are 178, 32 and 36 respectively. Similarly, for Master degree programme, as offered from various teaching departments of the faculties of agriculture, horticulture and agricultural engineering are 185, 48 and 12, respectively.

It has three Regional Research Stations and three Regional Research Sub-Stations all of which have well defined farms to carry out mandated research activities on location specific problem focused areas of production systems. The University currently runs 21 AICRPs and 3 AINPs, and 220 nos. of ad-hoc research project from various funding agencies of State Government /ICAR and private enterprises. The outreach delivery system of the University is composed of four Krishi Vigyan Kendras; training units attached to the Directorate, Regional Research Stations and Sub-stations; Agricultural Technology Information Centre (ATIC); well dispersed Extension Education Units (EEUs); Farm Information and Publication Unit and a well-equipped Exhibition Unit. In the year 2016, the Viswavidyalaya has been accredited for five years by Indian Council of Agricultural Research.

Mandate of the university

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

- To provide facilities for the study of agriculture, both basic and applied sciences relating to terrestrial and aquatic crops agricultural engineering and technology,

horticulture, marketing and processing, land use and management, soil and water management and all matters collected therewith and incidental thereto.

- To conduct researches in these sciences and undertake the educational and extension programmes in agriculture among the rural clientele base, keeping in view the requirements of the state.
- To provide appropriate technical and consultative support to the state government towards its implementation of agricultural development programme.

Objectives of the University

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

No. of constituent colleges : 5

No. of affiliated colleges : Nil

Details of all constituent colleges

SN	Name of Constituent College	Year of Establish-ment	Location of along with		Designation of Head of Colleges (Dean/Associate Dean)	Telephone No.	Official email of College
			Place	District			
1.	Faculty of Agriculture	1974	Mohanpur	Nadia	Dean	033-25878338	deanofag.bckv@gmail.com
2.	Faculty of Horticulture	1996	Mohanpur	Nadia	Dean	09433565299	dean.ht@bckv.edu.in
3.	Faculty of Agricultural Engineering	1996	Mohanpur	Nadia	Dean	03473-222657	dean.ae@bckv.edu.in
4.	College of Agriculture	2014	Burdwan	Burdwan	Associate Dean	09433947041	drdipakghosh08@gmail.com
5.	College of Agriculture	2015	Chatna	Bankura	Associate Dean	09007578684	ad.bankura@bckv.edu.in

Academic programmes in university/ all constituent colleges/faculty

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

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

Student status in university/ all constituent colleges/faculty

SN	Name of College	Parameters	Numbers				
			Bachelor's	Master's	Ph. D.	Others including Diploma	Total
1.	Faculty of Agriculture	Intake (1st Yr)	132	224	164	No other Degrees are conferred	**520**
		Enrolled (1st Yr)	125	191	161		**477**
		Passed Out	**93**	**196**	**23**		**312**
2.	Faculty of Horticulture	Intake (1st Yr)	37	57	32		**126**
		Enrolled (1st Yr)	36	43	31		**110**
		Passed Out	**25**	**44**	**14**		**83**
3.	Faculty of Agricultural Engineering	Intake (1st Yr)	37	40	19		**96**
		Enrolled (1st Yr)	25	34	15		**74**
		Passed Out	**28**	**27**	**0**		**55**
4.	College of Agriculture, Burdwan Campus	Intake (1st Yr)	32	No Master's and PhD Degree			**32**
		Enrolled (1st Yr)	32				**32**
		Passed Out	**26**				**26**
5.	College of Agriculture, Chatna, Bankura	Intake (1st Yr)	32				**32**
		Enrolled (1st Yr)	31				**31**
		Passed Out	**28**				**28**

Affiliated private colleges with the university : No affiliated college

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

Degree	Faculty / College	No. of students							
		SC	ST	OBC-A	OBC-B	General	Others	ICAR	Total
Bachelor's	Faculty of Agriculture	99	29	44	32	239	30	43	**516**
	Faculty of Horticulture	31	10	12	6	63	3	15	**140**
	Faculty of Agril. Engineering	25	10	14	8	42	21	10	**130**
	College of Agriculture, Burdwan	30	8	12	5	56	17	0	**128**
	College of Agriculture, Chatna	30	8	12	8	64	4	0	**126**
Master's	Faculty of Agriculture	71	19	37	20	178	7	70	**402**
	Faculty of Horticulture	17	3	9	4	48	2	20	**103**
	Faculty of Agril. Engineering	10	3	3	3	23	1	8	**51**
Ph. D.	Faculty of Agriculture	24	3	9	11	74	250	33	**404**
	Faculty of Horticulture	9	0	0	3	25	49	4	**90**
	Faculty of Agril. Engineering	2	0	0	0	5	21	1	**29**
Total		**348**	**93**	**152**	**100**	**817**	**405**	**204**	**2119**

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

SN	Name of College	Parameters	Numbers (including 1st, 2nd, 3rd, 4th, 5th, and 6th year as applicable)			
			Bachelor's	Master's	Ph. D.	Total
1.	Faculty of Agriculture	Male	337	253	247	837
		Female	179	149	157	485
		Total	**516**	**402**	**404**	**1322**
2.	Faculty of Horticulture	Male	88	64	55	207
		Female	52	39	35	126
		Total	**140**	**103**	**90**	**333**
3.	Faculty of Agricultural Engineering	Male	107	40	25	172
		Female	23	11	4	38
		Total	**130**	**51**	**29**	**210**
4.	College of Agriculture, Burdwan	Male	85	These two colleges don't have any Masters and Doctoral degree programme.		85
		Female	43			43
		Total	**128**			**128**
5.	College of Agriculture, Chatna	Male	87			87
		Female	39			38
		Total	**126**			**126**

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 allotted beds	Room	Beds
1.	Matangini Abas	Girls	Mohanpur, Nadia	No	74	288	288	-	-
2.	Mahasweta Abas	Girls	Mohanpur, Nadia	No	30	90	90	-	-
3.	Nivedita Abas	Main Hostel	Girls	Mohanpur, Nadia	No	30	70	70	-	-
		Staff Quarter :wings of Nivedita Abas	Girls	Mohanpur, Nadia	No	-	-	-	12	15
4.	Borlaug Abas	Girls	Mohanpur, Nadia	No	25	55	55	-	-
5.	Raman Abas	Boys	Mohanpur, Nadia	No	85	225	225	-	-
6.	Jagadish Abas	Boys	Mohanpur, Nadia	No	80	225	225	-	-
7.	Vidyasagar Abas	Boys	Mohanpur, Nadia	No	132	180	180	-	-
8.	Rabindra Abas	Boys	Mohanpur, Nadia	No	132	180	180	-	-
9.	Nazrul Abas	Main Hostel	Boys	Mohanpur, Nadia	No	12	24	24	-	-
		Staff Quarter – 1, wings of Nazrul Abas	Boys	Mohanpur, Nadia	No	-	-	-	18	30

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	Room	Beds
9.	Nazrul Abas (Contd.) 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	32	70	70	-	-
11.	Arabinda Abas	Boys	Kalyani, Nadia	Internet	32	70	70	-	-

Present faculty strength in the university/college/ faculty

SN	Name of the University/ College/ Faculty	Sanctioned				Faculty based on present designation in position after CAS implementation			
		Prof.	Assoc. Prof.	Asst. Prof.	Total	Prof.	Assoc. Prof.	Asst. Prof.	Total
1.	Faculty of Agriculture	19	47	109	175	73	24	59	156
2.	Faculty of Horticulture	6	14	22	42	25	5	5	35
3.	Faculty of Agril. Engineering	5	5	12	22	5	1	4	10
4.	College of Agriculture, Bankura	11	0	11	22	0	0	9	9
5.	College of Agriculture, Burdwan	11	0	11	22	0	0	9	9
	Total	**52**	**66**	**165**	**283**	**103**	**30**	**86**	**219**

Budgetary support to the university (Rs. in lakh)

Budget Heads	Total Funding form State Government			Funding support from ICAR(Rs. lakh)				Total ICAR support	Any other central funding**	Grand Total
				Education Division	AICRP	KVK	Any other ICAR support*			
	Plan 1	Non-Plan 2	Total 1+2=3	4	5	6	7	(4+5+6+7) = 8	9	3+8+9
Salary	0	12639.38	12639.38	0.00	963.97	668.51	0.00	1632.48	0.00	14271.86
Capital	0	0.00	0.00	99.70	11.15	8.40	49.39	168.64	333.24	501.88
Revenue	0	24.37	24.37	151.20	207.63	126.95	121.40	607.18	447.16	1078.71
Total	**0**	**12663.75**	**12663.75**	**250.90**	**1182.75**	**803.86**	**170.79**	**2408.30**	**780.40**	**15852.45**

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

Total revenue generation from all sources by agriculture university including off campus colleges

Student's Collection	-	106.53Lakh
Sale Proceed of farms	-	101.15Lakh
Sale Proceed other than farm	-	32.06 Lakh
Misc. earnings	-	490.64Lakh
Total amount		**730.38Lakh**

All new/existing civil works repair and renovation under taken out of the development grant(Rs. in lakh)

SN	Name of the university/ college/ faculty	Name of the civil work undertaken	Location of civil work	Cost (Lakh)	Work completed/ In process	% ICAR Share	% State Share
1.	BCKV, Mohanpur	Underground Cable line	Boys Hostels	20.50	Work Completed	100%	Nil
2.	Faculty of Agriculture	Refurbishing of Room with Floor tiles, False ceiling wall painting, window curtain etc.	Smart class room-1	1.20	Work Completed	100%	Nil
3.	Faculty of Agriculture	Refurbishing of Room with Floor tiles, False ceiling wall painting, window curtain etc.	Smart class room-2	1.20	Work Completed	100%	Nil
4.	Faculty of Horticulture	Refurbishing of Room with Floor tiles, False ceiling wall painting, window curtain etc.	Smart class room-3	0.80	Work Completed	100%	Nil
5.	Faculty of Engineering	Refurbishing of Room with Floor tiles, False ceiling wall painting, window curtain etc.	Smart class room-4	0.80	Work Completed	100%	Nil
			Total amount Rs.	**24.50**			

Details of sports facilities strengthened by ICAR (Rs. in Lakh)

SN	Name of the University/ College/ Faculty	Location of the facilities & District	List of Sports Facility	Cost
1.	Dean Student's Welfare, BCKV	Mohanpur & Kalyani Campus, BCKV	Purchase of Sports items	4.89274
	Total			4.89274

Total number of smart class room developed (Till date): 4

Equipments purchased/replaced from development grantsduring the reporting period

SN	Name of the University/ College/ Faculty	Location & District	Name of Laboratory where Equipment installed	Name of equipment	New/ Repair	Cost (Rs. in Lakh)
1.	Agriculture	BCKV, Mohanpur	Smart Class Room-1	Touch interactive 4K Panel(75")	New	1.97
2.	Agriculture	-Do-	-Do-	Short throw projector	New	0.67
3.	Agriculture	-Do-	-Do-	Desktop document camera	New	0.35
4.	Agriculture	-Do-	-Do-	Desktop PC	New	0.36
5.	Agriculture	-Do-	-Do-	colour laser Printer	New	0.26
6.	Agriculture	-Do-	Smart Class Room-2	Touch interactive 4K Panel(75")	New	1.97

SN	Name of the university/ college/ faculty	Location & district	Name of laboratory where equipment installed	Name of equipment	New/ Repair	Cost (Rs. in Lakh)
7.	Agriculture	BCKV, Mohanpur	Smart Class Room-2	Short throw projector	New	0.67
8.	Agriculture	-Do-	-Do-	Desktop document camera	New	0.35
9.	Agriculture	-Do-	-Do-	Desktop PC	New	0.36
10.	Agriculture	-Do-	-Do-	Colour laser Printer	New	0.26
11.	Horticulture	-Do-	Department of Floriculture and Landscape Architecture	Digital balance	New	0.14
12.	Horticulture	-Do-	-Do-	Accupipet (Variable)	New	0.06
13.	Horticulture	-Do-	Dept. of Fruit Science	Secateurs	New	0.04
14.	Horticulture	-Do-	-Do-	Digital balance	New	0.12
15.	Horticulture	-Do-	-Do-	Slider caliper	New	0.04
16.	Horticulture	-Do-	Dept. of Postharvest Technology	Digital balance	New	0.04
17.	Horticulture	-Do-	-Do-	Crown capping machine	New	0.10
18.	Horticulture	-Do-	-Do-	Steel utensils	New	0.06
19.	Horticulture	-Do-	Dept. of Plantation, Spices, Medicinal and Aromatic Crops	Digital side calipers	New	0.13
20.	Horticulture	-Do-	-Do-	Precision balance	New	0.07
21.	Horticulture	-Do-	Smart Class Room-3	Touch interactive 4K Panel(75")	New	1.97
22.	Horticulture	-Do-	-Do-	Short throw projector	New	0.67
23.	Horticulture	-Do-	-Do-	Desktop document camera	New	0.35
24.	Horticulture	-Do-	-Do-	Desktop PC	New	0.36
25.	Horticulture	-Do-	-Do-	Colour laser printer	New	0.26
26.	Agril. Engineering	-Do-	Smart Class Room-4	Touch interactive 4K Panel(75")	New	1.97
27.	Agril. Engineering	BCKV, Mohanpur	Smart Class Room-4	Short throw projector	New	0.67
28.	-Do-	-Do-	-Do-	Desktop document camera	New	0.35
29.	-Do-	-Do-	-Do-	Desktop PC	New	0.36
30.	-Do-	-Do-	-Do-	Colour laser printer	New	0.26
31.	BCKV	-Do-	Health Centre	X ray machine AGFA CR 12X Set	New	6.50
32.	BCKV	-Do-	-Do-	3000 Evolution	New	2.30

33.	BCKV	-Do-	-Do-	Semi auto machine BPL ECG Machine	New	4.60
			Total			**28.64**

IT equipment's including hardwares/softwares etc.purchased from the development grants(Rs. in Lakh)

SN	Name of the university/ college/ faculty	Location & District	Equipment installed in	Name of equipment (No. of eqipment)	New/ Repair	Cost of equipment (Lakh)
1.	Faculty of Agriculture	Mohanpur, Nadia	Smart Classroom	Touch Interactive Flat Panel Display (2)	New	3.94
				Short Throw Projector (2)	New	1.33
				Desktop PC (2)	New	0.72
				Desktop Document Camera (2)	New	0.70
				Colur Laser Printer (2)	New	0.53
2.	Faculty of Horticulture	Mohanpur, Nadia	Smart Classroom	Touch Interactive Flat Panel Display (1)	New	1.97
				Short Throw Projector (1)	New	0.66
				Desktop Document Camera (1)	New	0.35
				Desktop PC (1)	New	0.36
				Colur Laser Printer (1)	New	0.26
			Dean's Office	UPS – intex 600 VA	New	0.08
				Monitor AOC 20 inch Led	New	0.06
				Laser printer scanner copier HP LaserJet M1136 mfp	New	0.15
				Laser printer HP Laser 108 a single function/Monochrome	New	0.09
				Processor : Intel Dual core (G-3240) 3.1 Ghz	New	0.05
				UPS Intex 600 VA	New	0.02
3.	Faculty of Agricultural Engineering	Mohanpur, Nadia	Smart Classroom	Touch Interactive Flat Panel Display (1)	New	1.97
				Short Throw Projector (1)	New	0.66
				Desktop Document Camera (1)	New	0.35
				Desktop PC (1)	New	0.36
				Colur Laser Printer (1)	New	0.26
			Total			**14.87**

Furnitures and fixtures purchased out of development grant for hostel, laboratory, exam hall and class rooms

SN	Name of the university/ college/ faculty	Location & District	Equipment installed in	Name of Furniture	New/ Repair	Cost (Rs. in Lakh)
1.	Agriculture	BCKV, Mohanpur	Smart Class Room-1	Student Seat-cum-Desk (30Nos)	New	4.26
2.	Agriculture	-Do-	Smart Class Room-1	Aluminium work	New	0.11
3.	Agriculture	-Do-	Smart Class Room-2	Student Seat-cum-Desk (30Nos)	New	4.26
4.	Horticulture	-Do-	Smart Class Room-3	Student Seat-cum-Desk (15Nos)	New	2.13
5.	Agril. Engineering	-Do-	Smart Class Room-4	Student Seat-cum-Desk (15Nos)	New	2.13
6.	BCKV, Mohanpur	-Do-	Hostels	Whatnot (30nos)	New	3.68
7.	BCKV, Mohanpur	-Do-	-Do-	Table (60nos)	New	2.96
8.	BCKV, Mohanpur	-Do-	-Do-	Chair (60nos)	New	2.57
	Total					**22.10**

Status of internet and Wi-Fi connectivity

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

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

SN	Name of the University/ College/ Faculty	No. of Student Beneficiaries along with Stipend given						Total	
		RAWE		In-plant training		Internship			
		No.	Stipend	No.	Stipend	No.	Stipend	No.	Stipend
1.	Faculty of Agriculture	133	23.94	-	-	-	-	133	23.94
2.	Faculty of Horticulture	31	5.58	-	-	-	-	31	5.58
3.	Faculty of Agricultural Engineering	-	-	37	1.11	28	2.94	65	4.05
	Total	**164**	**29.52**	**37**	**1.11**	**28**	**2.94**	**229**	**33.57**

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

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

SN	Name of the university/ college/ faculty	No. of student beneficiaries				Grand total	
		UG-NTS		PG-NTS			
		No.	Total Stipend	No.	Total Stipend	No.	Total Stipend
1.	Faculty of Agriculture	22	7.92	43	16.35	65	24.27
2.	Faculty of Horticulture,	03	1.08	10	6.00	13	7.08
3.	Faculty of Agricultural Engineering,	03	1.08	13	2.85	16	3.93
Total		**28**	**10.08**	**66**	**25.20**	**94**	**35.28**

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

Name of College along with location	Name of the EL Modules	Established with Support from ICAR/University /State	Nodal Officer of EL module, 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
F./Ag., BCKV Mohanpur	Commercial Apiculture	ICAR	Prof. S. Jha 9433011529 sjha2007@gmail.com	60.00 (25.00 +35.00)	2020 - 21 Trained -35 nos. Stud. **Total- 81 (Last 5 Yr)**	Honey	Last 5 Last Five Years 2020-21 **Total- 36.82**	Last 5 Years Including 2020-21 **Total- 23.26**	Total amount paid (@ Rs. 3,500 per head per month)
F./Hort., BCKV, Mohanpur	Commercial Horticulture	ICAR	Prof. U. Thapa 9830234577 dr.umeshthapa@yahoo.in	65.00 (25.00 + 40.00)	**Total- 204** 2020-21=32	High value veggies, flowers and quality planting materials	**0. 78**	0.45 Lac	25% 2020-21- No Share distribution due to lock down training had been implemented in online mode
F./Hort., BCKV, Mohanpur	Fruit Beverage Unit	ICAR	Prof. S. Mitra 9433513560 drsurajitmitra@yahoo.co.in	80.00		Fruit beverages to be prepared in commercial scale	To be made operational. Delay due to incomplete installation and fabrication owing to COVID lockdown. .		
F./Ag. Engg., BCKV, Mohanpur	Maintenance and Custom-hiring of Farm Machinery and equipment	ICAR	Prof. P. S. Chattopadhyay 9903406877 pschattopadhya@yahoo.com	18.00	**Total- 44** 2020-21=9	B .Tech (Ag. Engg.) students are getting training on maintenance of farm machinery	-	**Skill mode**	

Name of College along with location	Name of the EL Modules	Established with Support from ICAR/University /State	Nodal Officer of EL module, 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
F./ Ag. Engg., BCKV, Mohanpur	Drip Fertigation to Fruit Crops for Better Yield and Economy	ICAR	Prof. P.S. Chattopadhyay pschattopadhya@yahoo.com	15.30	**Total-39** 2020-21=7	Irrigation facility	-	**Skill mode**	-
F./ Ag. Engg., BCKV, Mohanpur	Model rice based Agro-processing Unit	ICAR	Prof. S.Mukherjee 9836991461 souti62@rediffmail.com	68.00	**Total-41** 2020-21=8	Rice Processing	-	**Skill mode**	-
F./ Ag. Engg., BCKV, Mohanpur	Design, fabrication and testing of Farm machinery	ICAR	Prof. P.S. Chattopadhyay pschattopadhya@yahoo.com	180.00	**Total-42** 2020-21=8	In house training on design, fabrication and testing of small farm machinery	-	**Skill mode**	-

Number of students selected for JRF/SRF/NET (ICAR/ICMR/UGC/CSIR/DBT)/ARS

SN	Name of College/ Faculty	JRF	SRF	NET	ARS	UGC NET	GATE
1.	Faculty of Agriculture	38	9	60	Nil	8	Nil
2.	Faculty of Horticulture	2	1	16	Nil	Nil	Nil
3.	Faculty of Ag. Engineering	3	Nil	Nil	Nil	Nil	Nil
	Total	**43**	**10**	**76**	**Nil**	**8**	**Nil**

Academic achievements (Ph. D. thesis)

SN	Name of College/Faculty	No. of Ph. D. Thesis Awarded in the reported year	No. of Publication with NAAS /Thomson & Reuters Rating			Remarks
			< 5	5.0-7.5	> 7.5	
1.	Faculty of Agriculture	23	32	45	11	Good number of articles from Ph.D. Theses are published during 2020-21
2.	Faculty of Horticulture	14	7	37	2	
3.	Faculty of Ag. Engineering	Nil	-	-	-	
	Total	**37**	**39**	**82**	**13**	

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

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

Significant achievements made out of the ICAR development grant

- Establishment of 4 nos. of Smart Class-rooms.
- Creation of underground Electric Cable line for the Boys' hostel
- Medical equipments like X-Ray machine, evolution semi-automatic machine and ECG machine were purchased
- Instruments for the laboratories of the horticulture faculty were purchased
- Practical manuals have been prepared for the benefit of the students
- Several UG and PG laboratories of various academic departments have been renovated

Major constraints faced by the university

- With the incidence of COVID pandemic starting in March 2020, the mode of education delivery by the university has been changed from offline to online. To be acquainted with the new system, faculties need to be upgraded/trained with modern IT infrastructure. Improvement of IT infrastructure and purchase of IT services are urgently needed.
- Due to enhancement of students at UG/PG level in line with national Higher Education policy of Agriculture, accommodation of boys in hostels has been a major constraint and so construction of Boys' Hostel is an urgent requirement.

Justification for continuing ICAR support during XIII Plan

Bidhan Chandra Krishi Viswavidyalaya as a premier state agricultural university of West Bengal has been showing excellence in teaching and research. The university has been able to produce outstanding graduates and post graduates who have shown good performance at national and international spheres during the last decades. The university has made good progress in the infrastructural development with ample support from ICAR, Govt. of India as well as Govt. of West Bengal during the last few years.

For the implementation of the new educational policy, the Government has emphasized the policy on producing more 'job givers' than 'job takers' which requires modernization of agricultural universities equipped with 'Skill Development Centre, Incubation Centre and Centre for Advanced Research in the priority areas. At the same time, the teaching establishment must be modernized with more IT-enabled tools and systems to meet the challenges of the new education policy.

This can only be possible with continuing funding support from the ICAR.

Top five priority areas related to Higher Agriculture Education Improvement that university Wishes ICAR to Support

- Creation of an Incubation Centre to develop entrepreneurship among the students.
- Construction of new Boys' Hostel and upgradation of Hostel Facilities. The older hostels (more than 30 years old) also need renovation and modernization.
- The IT infrastructure requires modernization to meet the emerging challenges. The students must get the benefit of information and communication technology for their professional development.
- 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.
- Modernization of University Farms

Details of Financial Progress of Development Grant

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

Financial Year of the Demand: 2020-21 (Rs. in Lakh)

SN	Components	Allocation of Grant	Main campus	F./Ag.	F./Hort.	F./Ag. Engg.	PG Faculty	Total of University
A.	**Grant-in-Aid CAPITAL**							
1	**Works**							
1.1	**a. Land**	×	×	×	×	×	×	×
1.2	**b. Building**		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
1.2.1	Girls' Hostel		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
1.2.2	Boys' Hostel		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
1.2.3	International Hostel		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
1.2.4	Examination Hall		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
1.2.5	Educational Museum		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
1.2.6	University Auditorium		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
1.3	**c. Works**		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
1.3.1	Repair/ Renovation of Hostel		26.85026	0.00000	0.00000	0.00000	0.00000	26.85026
1.3.2	Repair/ Renovation of Examination/ Laboratories/ Sports Facility/ Green Initiatives		0.00000	2.50000	2.50000	0.00000	0.00000	5.00000
1.3.3	Refurbishing of Smart Class Rooms		0.00000	10.00000	10.00000	10.00000	0.00000	30.00000
1.3.4	Centenary Grant/ Renovation of Old and Historical Infrastructure		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2	**Equipment**		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2.1	Equipment for Central Instrumentation Facility		5.00000	0.00000	0.00000	0.00000	0.00000	5.00000
2.2	Equipment for UG & PG Laboratories/ Sports Facility/ Green Initiatives **excluding computers & its peripherals**		5.00000	4.00000	1.50000	2.50000	0.00000	13.00000
2.3	Minor Equipment under Nodal Cell		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
3	**Information Technology** (Computer Hardware/ Software)		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
3.1	Computer Hardware		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
3.2	Computer Software		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
4	**Library Books & Journals**	×	×	×	×	×	×	×
4.1	Print Book	×	×	×	×	×	×	×
4.2	Print Journal	×	×	×	×	×	×	×
4.3	e-Book other than CeRA	×	×	×	×	×	×	×
4.4	e-Journalother than CeRA	×	×	×	×	×	×	×
4.5	Digitization of Resources	×	×	×	×	×	×	×
5	**Vehicles & Vessels**	×	×	×	×	×	×	×
6	**Livestock**	×	×	×	×	×	×	×
7	**Furniture and Fixtures for**							
7.1	Hostel		16.00000	0.00000	0.00000	0.00000	0.00000	16.00000
7.2	Examination Hall							
7.3	Laboratory		0.00000	0.85026	0.50000	0.50000	0.00000	1.85026

SN	Components	Allocation of Grant	Main campus	F./Ag.	F./Hort.	F./Ag. Engg.	PG Faculty	Total of University
7.4	Class Room		0.00000	0.00000	0.00000	0.00000	2.00000	2.00000
7.5	Library	×	×	×	×	×	×	×
8	**Others**							
	Total CAPITAL		**52.85026**	**17.35026**	**14.50000**	**13.0000**	**2.00000**	**99.70052**
B.	**Grant-in-Aid Salaries (REVENUE)**	×	×	×	×	×	×	×
C.	**Grant-in-Aid General (REVENUE)**		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
9	**Research & Operational Expenses**		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
9.1	**Research Expenses**		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
9.1.1	**Curriculum Development and Delivery**: Contingency grants for UG/PG Practical and preparation of Instructional Manuals		1.00000	0.00000	0.00000	0.00000	0.00000	1.00000
9.1.2	**Strengthening of UG/ PG Teaching:** Participation of Faculty/ Ph.D. students in Seminars/ Conferences/Trainings including Educational Tour within the country. In no case funding for foreign travel will be allowed.		1.00000	1.80000	1.00000	1.00000	1.00000	5.80000
9.1.3	**Support to DEAN**		1.00000	0.00000	0.00000	0.00000	0.00000	1.00000
9.2	**Operational Expenses**							
9.2.1	**Student and Faculty Amenities**: Tutorials for SC/ST students; Students Counseling, Placement Cell; Health Facilities; Personality Development; Recreation facilities including Agri-Unifest & Agri-Sports		1.00000	0.00000	0.00000	0.00000	0.00000	1.00000
9.2.2	Best Teacher Award; Guest & Adjunct Faculty		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
9.2.3	Support to Nodal Cell		2.27784	0.00000	0.00000	0.00000	0.00000	2.27784
10	**Miscellaneous Expenses**		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
11	Others		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
12	**Publicity & Exhibitions**							
	Total Grant in Aid-Capital		**52.85026**	**17.35026**	**14.50000**	**13.0000**	**2.00000**	**99.70052**
	Total Grant in Aid-Salary		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Total Grant in Aid-Revenue		**6.27784**	**1.80000**	**1.00000**	**1.00000**	**1.00000**	**11.07784**
	Grand Total: Grant in Aid (CAPITAL+ SALARY + REVENUE)		**59.12810**	**19.15026**	**15.50000**	**14.0000**	**3.00000**	**110.77836**

Laboratory Facility in the Agriculture Building

ELP programme:Commercial Horticulture

e-resources in the Central Library

University Gymnasium

Nodule Research Laboratory

(Prof. M.K. Nanda)

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

(Prof. B. S. Mahapatra)

Vice-chancellor
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