

Annual Report

2018-19



Banda University of Agriculture & Technology
Banda-210 001 (U.P.)

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Published by : **Banda University of Agriculture & Technology**
Banda-210 001, U.P. (India)

Correct citation : **Annual Report 2018-19**
Banda University of Agriculture & Technology, Banda (U.P.)

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FOREWORD



Dr. U. S. Gautam
Vice Chancellor

Being the first and youngest State Agriculture University in the Bundelkhand region, are delighted to bring the Annual Progress Report 2018-19. We are particularly pleased with the overall progress of the University at regional, national and international level. While the Banda University of Agriculture and Technology (BUAT) Banda secured 43rd rank in the ICAR Agriculture Universities across the country and achieved a dynamic growth in a short span.

We would like to take the opportunity of providing a brief overview of our major activities in 2018. Last year, we continued to pursue our strategy of focusing our efforts on their core areas of the expertise and raised the profile of the University in every aspect. The BUAT endeavors to build an inclusive, productive and rewarding academic institution in the Bundelkhand region. We have taken on the challenge to substantially improve and grow the agriculture and allied fields in the Bundelkhand region through a participatory approach.

Our positive development in the previous year confirms that we are on the right track with the BUAT Mission and Vision of 2050. Our goal is still to continue our efforts in strengthening teaching, research and extension through innovative practices. In addition, we are also expanding our consistent alignment with nourishing the agriculture and allied sectors in general and human well-being in particular in the Bundelkhand region.

This report presents the major activities conducted during FY 2018-19, which we trust, will serve as a useful document in the BUAT journey and a landmark in the agricultural and allied sectors. At BUAT, I joined my colleagues to compliment the Editorial Committee of the Annual Progress Report for their tenacity, diligence and ability to provide a portrait of the University during 2018-19.

A handwritten signature in black ink, appearing to read 'U. S. Gautam'.

(Dr. U. S. Gautam)

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EXECUTIVE SUMMARY

This report presents the progress of Banda Agriculture University and Technology (BUAT), Banda during April, 2018- March, 2019. The major highlight of the milestones accomplished by the university is appended below.

- Two meetings of Board of Management (BoM) were held under chairmanship of Hon'ble Vice Chancellor during 2018-19. Commencement of two-years degree programme of M.Sc. (Forestry) in College of Forestry and advertisement of sanctioned posts of College of Home Science were the important outcomes of 18th BoM meeting. Likewise, decision was taken to hold 4th convocation of the University, re-advertisement of vacant posts and to make strength of 120 students in B.Sc. (Hons.) in CoA and CoH from academic session 2019-20 during 19th BoM meeting.
- The major decisions taken during 13th and 14th meetings of Academic Council (2018-19) were adoption of B.Sc. (Hons) Agriculture & B.Sc. (Hons) Horticulture Degree Programmes in the act, statutes and regulations of university; course structure and course content for post graduate degree programme, MoU was signed between BUAT, Banda and CSDL Ventures Ltd. and establishment of an independent and centralized Examination Cell of the University.
- The university has made significant progress in infrastructure and amenities. The development of PG laboratories is under process.
- The Central Library has made remarkable progress during the period under report. The ARIS cell cum multimedia hall in the Central Library has been established. The library is equipped with twelve computers, internet connectivity and facility of online e-journals, J-GATE and also has subscription of 122 e-books. One day CeRA (Consortium for e-Resources in Agriculture) workshop was also organized in collaboration with ICAR-DKMA, New Delhi on 26th February, 2019.
- The construction of a new boys' hostel with capacity of 120 students has been completed.
- Agro-meteorological observatory has been established and started functioning as per the guidelines of IMD. The weather agro-advisory committee of the university is providing agro-advisories, fortnightly, to the farmers of Bundelkhand region based on the agro-metdata.
- The university has adopted the green energy concept. A solar power plant with the capacity to produce 652 KW electricity has been installed. The plant was inaugurated by the Shri Ram Naik, Hon'ble Governor, UP on 26th September, 2018.
- A significant progress has been made in the Ken Irrigation Project worth of Rs. 1874.86 lakh during 2018-19. Land acquisition for head works, laying of HDPE line for conveyance and installation of 33/0.44 kV substation for supply of electricity for pump house has been completed.
- The University has started the production, processing and distribution of quality seeds of urd, moong, pigeonpea, chickpea and lentil to the farmers with the establishment of seed hubs. During 2018-19, four seed hubs (one at the University campus and three in KVKs) have been established under the Central Govt. Project "*Creation of seed hubs for increasing indigenous production of pulses in India*". All the seed hubs significantly produced total 4127 q foundation seeds of pulse crops like pigeon pea (43 q), moong bean (18 q), urd bean (256 q) field pea (1744 q), chickpea (1717 q) and lentil (349 q).
- A total of 61, 59 and 53 students were enrolled at Colleges of Agriculture, Horticulture and Forestry, respectively, during 2018-19. Post Graduate (PG) programmes have also been started from the session 2018-19 with seven specialisations in College of Agriculture and four specialisations in College of Horticulture. Total 41 students were enrolled in PG programmes.

- The fourth convocation of the University was organized on 26th September 2018, where Hon'ble Governor of Uttar Pradesh, Shri Ram Naik conferred degrees to 83 graduates of B.Sc.(Hons.) Agriculture and B.Sc.(Hons.) Horticulture degree programmes of Batch 2014. Prof. S.N. Puri, Ex-Vice Chancellor, MPKV, Rahuri and CAU, Imphal was the Chief Guest and delivered the Convocation Address.
- Among the passed out students of batch 2014, two students qualified ICAR JRF Examination for PG studies. Remaining students qualified UPCATET and other competitive examination of central and state universities and are pursuing post graduate studies.
- Two graduates of College of Horticulture viz., Mr. Himanshu Dixit and Mr. Lavlesh Kumar established their entrepreneurial venture in the field of food processing.
- As a part of University Cultural Team, 21 students of the university participated in 19th All India Agricultural Universities Youth Festival held during February 2nd-7th, 2019 at Sardar Krushinagar Dantiwada Agricultural University, Gujarat for the first time.
- Experiential Learning Programme (ELP) on “Development of entrepreneurship skills through spawn and mushroom production” has been started in Department of Plant Pathology, CoA funded by ICAR, New Delhi with the objective of developing entrepreneurship among agriculture graduates.
- Thirteen faculty members of university were awarded by various reputed organizations for their significant contribution in teaching, research and extension.
- Two main centres of AICRP on Linseed and Sesame and 10 Voluntary Centres of AICRP are currently running in the university. Two projects funded from International organizations namely IRRI, Philippines and ICRISAT, Hyderabad and four projects from reputed national funding agencies (DASD, Govt. of India, SERB, DST, New Delhi and Govt. of U.P., Lucknow) are also running. In addition, four projects have also been funded by private sectors.
- The Germplasms/genotypes of various pulses and oilseed crops have been collected under various projects and 90 chickpea germplasm lines screened for drought tolerance.
- Survey and collection of land races/genotypes/local varieties/lines such as onion (10 genotypes), garlic (11 genotypes) and okra (25 genotypes) have been collected.
- Diploma Programme in Agricultural Extension Services for Input Dealers (DAESI) was conducted with financial assistance from National Institute of Agriculture Extension Management (MANAGE), Hyderabad.
- All the 6 KVKs of the university organized 368 training courses with the participation of 9823 farmers comprising farm women, rural youths and extension functionaries. The farmers and farm women were represented in a proportion of 77.73% and 21.79%, respectively. Total 8061 farmers and farm women and 459 rural youths were provided skill training in different enterprises. Similarly, 548 extension personnel and 755 sponsored participants were also trained in different areas. Zonal workshop on CFLD and Seed hub was organized at BUAT, Banda.
- Directorate of Extension has also conducted 10 Frontline demonstrations on chickpea and 50 Frontline demonstrations on mustard covering 10 acres and 50 acres of area, respectively. Directorate has also participated in Krishi Kumbh held at IISR, Lucknow during 26-28 October, 2018 and Farmers Fair at DRI, Chitrakoot during 25-27 February, 2019.
- Technology demonstrations on pulses, oilseeds, cereals & millets were organized on an area of 236 ha, 197 ha and 60.4 ha, respectively. Besides, 11 demonstrations on vegetable crops covering an area of 10.65 ha, 2 demonstrations on fodder production technology and 8 demonstrations on livestock were also conducted.
- Total 44 technologies across 11 thematic areas, including INM (02), IPM (08), IDM (05), ICM (02), Weed

Management (02), Varietal Evaluation (14), RCT (02), Drudgery Reduction (04), Nutritional Garden (03), IFS (1), Small Scale Income Generation (1) were assessed at 1245 farmers' fields. In addition, 10 technologies were assessed under livestock management by KVKs with active participation of 66 beneficiaries.

- University, for the first time, has successfully conducted Uttar Pradesh Combined Agriculture & Technology Entrance Test (UPCATET), 2018 and introduced online counselling for admission.
- The Colleges of Agriculture and Horticulture accredited by the ICAR based on the recommendation submitted by Peer Review Team. The university secured 43rd rank among all the state agricultural universities by ICAR.
- Dr. U.S. Gautam, Former Director, ICAR-ATARI, Kanpur has joined as 3rd Vice Chancellor of BUAT, Banda on October 25th, 2018. Recently, Dr. Gautam has also been elected as the President of Indian Society of Extension Education, IARI, New Delhi.
- Dr. Aishwarya Maheshwari, Assistant Professor, Wildlife Sciences was invited at the World Life Science Conference, Beijing China (October 2018) and Conservation Geopolitics Forum, University of Oxford, UK (March, 2019).
- A targeted training programme on '*Dalhan adharit krishi pranali me kaushal vardhan*' was organised with the objective of promoting cultivation of high value pulse crops in Bundelkhand region especially for rural women during 28th - 30th November, 2018.
- The MIDH-Regional level workshop on '*Harnessing the potential of spices production in Bundelkhand region of U.P.: Issues and Strategies*' was held during 18-19 December, 2018 sponsored by Directorate of Arecanut and Spices Development, Calicut, Kerala under Mission of Integrated Development of Horticulture (MIDH).
- Two Skill Development Programmes (Gardener and Vermicom post Producer) were organized by ASCI, New Delhi during 1st - 30th January, 2019, which were sponsored by DASD, Calicut, Kerala.
- ICAR-JRF Preparation cell has been constituted at the Colleges of Agriculture and Horticulture to facilitate students for preparation of examination.
- The MANAGE sponsored winter school on "*Appropriate Agricultural Technologies and Extension Approaches for Doubling Farmers' Income*" was organized during 05th to 25th February, 2019.
- Shri Ranvendra Pratap Singh, Hon'ble Minister of State for Agriculture Education and Research, Govt. of UP inaugurated the 9th Foundation Week, which was celebrated from 2nd to 7th March, 2019. Dr. Milkha Singh Aulakh, Former VC, BUAT, Banda and Dr C. Prasad, Former DDG (Agril. Extension), ICAR also addressed the students.

सारांश

बांदा कृषि एवं प्रौद्योगिक विश्वविद्यालय, बांदा के वार्षिक प्रगति प्रतिवेदन (2018-19) में सम्मिलित विशिष्ट उपलब्धियों का बिन्दुवार प्रस्तुतिकरण किया जा रहा है—

- विश्वविद्यालय के प्रबन्धन कार्यकारिणी के सदस्यों की दो बैठकों का आयोजन मा0 कुलपति महोदय के अध्यक्षता में किया गया। 18वीं बैठक में वानिकी महाविद्यालय में द्विवर्षीय एम0एससी0 (वानिकी) परास्नातक डिग्री कार्यक्रम को आरम्भ करने एवं गृह विज्ञान महाविद्यालय में स्वीकृत पदों को विज्ञापित करने का निर्णय लिया गया। 19वीं बैठक में चतुर्थ दीक्षांत समारोह के आयोजन, पूर्व में विज्ञापित पदों के सापेक्ष रिक्त स्थानों को आगामी विज्ञापन में पुनः विज्ञापित करना, तथा शिक्षा सत्र 2019-20 से कृषि एवं उद्यान महाविद्यालय में बी.एससी. (आनर्स) स्नातक डिग्री कार्यक्रम में छात्रों की संख्या को 120 करने का निर्णय लिया गया।
- विश्वविद्यालय की विद्वत परिषद की 13वीं एवं 14वीं बैठक बी.एससी. (आनर्स) कृषि एवं उद्यान के स्नातक डिग्री कार्यक्रम को विश्वविद्यालय अधिनियम के अन्तर्गत अंगीकरण, परास्नातक डिग्री कार्यक्रम हेतु पाठ्यक्रम संरचना एवं पाठ्यक्रम सूची का अनुमोदन, छात्रों के प्रमाण पत्रों के अंकरूपण हेतु विश्वविद्यालय एवं सी.एस.डी.एल. वेंचर्स लि0 के मध्य समझौता ज्ञापन का आदान प्रदान तथा एक स्वतंत्र परीक्षा प्रकोष्ठ की स्थापना करने का निर्णय लिया गया।
- आधारीय संरचना एवं सुविधाओं के क्षेत्र में विश्वविद्यालय ने महत्वपूर्ण प्रगति की है। कृषि, उद्यान एवं वानिकी तीनों महाविद्यालय में विभिन्न डिग्री कार्यक्रमों हेतु सुसज्जित प्रयोगशालाओं के माध्यम से शिक्षण कार्य सुचारु चल रहा है। कृषि एवं उद्यान महाविद्यालय में परास्नातक प्रयोगशालाओं के विकास का कार्य किया जा रहा है।
- आख्या अवधि के अन्तर्गत केन्द्रीय ग्रंथागार की सुविधाओं में बेहद विकास किया गया है। केन्द्रीय ग्रंथागार एरिस प्रकोष्ठ सह मल्टीमीडिया कक्ष की स्थापना की गयी है। ग्रंथागार 12 संगणकों से सुसज्जित तथा इंटरनेट सुविधाओं से युक्त है। ग्रंथागार में 122 ई पुस्तकें उपलब्ध हैं तथा आनलाइन ई जरनल्स, जे गेट (कृषि एवं जीव विज्ञान) के माध्यम से सूचनायें प्राप्त की जा सकती है। एक दिवसीय सेरा कार्यशाला भा.कृ.अनु.प.—डी.के.एम.ए., नई दिल्ली के तत्वावधान में 26.02.2019 को आयोजित किया गया।
- 120 छात्रों के क्षमता वाले नये छात्रावास का निर्माण कार्य पूर्ण हो चुका है।
- मौसम वेधशाला की स्थापना की जा चुकी है तथा यह आई.एम.डी.के. दिशा निर्देशों के अन्तर्गत कार्य कर रहा है। बुन्देलखण्ड क्षेत्र हेतु मौसम संबन्धी आंकड़ों के अनुसार विश्वविद्यालय की मौसम आधारित कृषि सलाहकार समिति पाक्षिक अन्तराल पर कृषि सलाहकारी सूचनायें प्रदान कर रहा है।
- विश्वविद्यालय में हरित उर्जा की संकल्पना का अनुपालन किया है। 652 के.डब्ल्यू. विद्युत उत्पादन क्षमता का एक सौर्य संचालित संयंत्र विश्वविद्यालय विभिन्न इमारतों की छतों पर लगाया गया है। इस संयंत्र का उद्घाटन 26.09.2018 को श्री रामनाईक, मा0 राज्यपाल (उ0प्र0) द्वारा किया गया है।
- रू0 1874.86 लाख की केन्द्र सिंचाई परियोजना के अन्तर्गत अपेक्षित विकास हुआ है। भूमि अधिग्रहण के पश्चात एच.डी.पी.ई. लाइन बिछाने एवं पम्प हाउस में विद्युत आपूर्ति हेतु 33/0.44 के.वी. उप केन्द्र की स्थापना का कार्य सम्पन्न हो चुका है।
- विश्वविद्यालय ने उर्द, मूंग, अरहर, चना एवं मसूर के उन्नत बीज का उत्पादन, प्रसंस्करण एवं कृषकों को वितरण का कार्य सीड हब की स्थापना के पश्चात प्रारम्भ कर दिया है। भारत सरकार की परियोजना "भारत में सीड हब के निर्माण द्वारा दलहन के स्वदेशी उत्पादन में वृद्धि" के अन्तर्गत वर्ष 2018-19 में 4 सीड हब (एक विश्वविद्यालय परिसर एवं तीन अन्य कृषि विज्ञान केन्द्र में) की स्थापना की गयी है। चारों सीड हब द्वारा कुल 4127 कु0 आधारीय बीज का उत्पादन जिसमें अरहर (43 कु0), मूंग (18 कु0), उर्द (256 कु0), मटर (1744 कु0), चना (1717 कु0) एवं मसूर (349 कु0) के आधारीय बीज का उत्पादन किया गया है।

- वर्ष 2018–19 में कृषि, उद्यान एवं वानिकी तीनों महाविद्यालय में क्रमशः 61, 59 एवं 53 छात्रों ने स्नातक के विभिन्न पाठ्यक्रमों में प्रवेश लिया है। इसी वर्ष में कृषि महाविद्यालय में 7 एवं उद्यान महाविद्यालय में 4 विभागों में परास्तनातक डिग्री कार्यक्रम प्रारम्भ किया गया है। कुल 41 छात्रों ने परास्तनातक डिग्री कार्यक्रम के अन्तर्गत प्रवेश लिया है।
- विश्वविद्यालय के चतुर्थ दीक्षांत समारोह का आयोजन 26.09.2018 को किया गया जिसमें श्री रामनाईक, मा0 राज्यपाल (उ0प्र0) द्वारा 2014 बैच के 83 छात्रों को बी.एससी. (आनर्स) कृषि एवं बी.एससी. (आनर्स) उद्यान की उपाधि प्रदान की गयी। इस अवसर पर प्रो0 एस.एन. पुरी, पूर्व कुलपति (एम.पी.के.वी., राहुरी एवं सी.ए.यू., इम्फाल) ने कार्यक्रम के मुख्य अतिथि के रूप में अध्यक्षीय भाषण दिया।
- 2014 बैच के पास हुये छात्रों में से 2 छात्रों ने परास्तनातक डिग्री कार्यक्रम हेतु आई.सी.ए.आर.—जे.आर.एफ. की परीक्षा उत्तीर्ण की। शेष छात्रों ने केन्द्र एवं राज्य के विश्वविद्यालयों में यू.पी. कैटैट एवं अन्य प्रवेश परीक्षाओं के माध्यम से परास्तनातक डिग्री कार्यक्रम हेतु प्रवेश परीक्षा उत्तीर्ण की।
- उद्यान महाविद्यालय के 2 छात्रों, श्री हिमांशु दीक्षित एवं श्री लवलेश कुमार ने उद्यमिता हेतु खाद्य प्रसंस्करण इकाई की स्थापना की है।
- प्रथम बार विश्वविद्यालय की 21 सदस्य सांस्कृतिक टीम ने 19वीं अखिल भारतीय कृषि विश्वविद्यालय युवा महोत्सव में 2–7 फरवरी, 2019 को सरदार कृषि नगर दातिवाडा कृषि विश्वविद्यालय, गुजरात में प्रतिभाग किया।
- कृषि महाविद्यालय में पादप रोग विज्ञान विभाग में भा.कृ.अनु.प., नई दिल्ली द्वारा पोषित इ.एल.पी. कार्यक्रम (स्पान एवं मशरूम उत्पादन द्वारा उद्यमिता विकास) का शुभारम्भ किया गया।
- विश्वविद्यालय के 13 शिक्षकों को विभिन्न संस्थाओं द्वारा शिक्षा, शोध एवं प्रसार सेवाओं उत्कृष्ट कार्य हेतु पुरस्कृत किया गया है।
- विश्वविद्यालय में वर्तमान समय में अखिल भारतीय समन्वित शोध परियोजना—अलसी एवं तिल की 2 स्थायी परियोजनायें तथा विभिन्न फसलों के अन्तर्गत 10 ऐच्छिक परियोजनायें चल रही हैं। अन्तर्राष्ट्रीय संस्थाओं आई.आर.आर.आई., फिलिपाइन्स एवं इक्रीसैट, हैदराबाद की 2 परियोजनायें तथा राष्ट्रीय स्तर की विभिन्न संस्थाओं (डी.ए.एस.डी., एस.इ.आर.बी., डी.एस.टी., राज्य सरकार आदि) द्वारा प्रदत्त 4 परियोजनायें चल रही हैं। इसके अतिरिक्त निजी क्षेत्रों द्वारा पोषित 4 परियोजनायें भी शोध कार्यक्रम के अन्तर्गत चल रही हैं।
- विभिन्न परियोजनाओं के अन्तर्गत दलहनी एवं तिलहनी फसलों के जर्मप्लाज्म/जीनोटाइप का एकत्रीकरण किया गया है। साथ ही चने की 90 जर्मप्लाज्म लाइन को सूखा सहनशीलता हेतु स्क्रीन किया गया।
- सब्जियों के क्षेत्र में प्याज की 10 जीनोटाइप, लहसुन की 11 जीनोटाइप एवं भिंडी की 25 जीनोटाइप का एकत्रीकरण किया गया है।
- मैनेज, हैदराबाद द्वारा पोषित आदान वितरणों हेतु कृषि प्रसार में डिप्लोमा में कार्यक्रम पूर्ण हो चुका है।
- विश्वविद्यालय के 6 कृषि विज्ञान केन्द्रों द्वारा 368 प्रशिक्षण कार्यक्रम आयोजित किये गये जिसमें 9823 प्रशिक्षुओं (कृषक एवं महिला कृषक, नवयुवक प्रसार कार्यकर्ता) सहभागिता की। इन प्रशिक्षण कार्यक्रमों में 77.73 प्रतिशत कृषकों एवं 21.79 प्रतिशत महिला कृषकों ने प्रतिभाग किया। विभिन्न विषयों में आधारित कुल 8061 कृषकों एवं महिला कृषकों तथा 459 नवयुवक एवं नवयुवतियों ने कौशल विकास हेतु प्रशिक्षण प्राप्त किया। इसी प्रकार विभिन्न विषयों के अन्तर्गत 548 प्रसार कार्यकर्ताओं तथा 755 प्रायोजित लाभार्थियों ने प्रशिक्षण प्राप्त किया। सी.एफ.एल.डी एवं सीड हब आधारित क्षेत्रीय कार्यशाला का आयोजन भी किया गया।
- प्रसार निदेशालय ने चना में 10, सरसों में 50 अग्रिम पंक्ति प्रदर्शन क्रमशः 10 एवं 50 एकड़ क्षेत्रफल में किया। प्रसार निदेशालय ने 26–28 अक्टूबर 2018 में कृषि कुम्भ तथा 25–27 फरवरी 2019 के मध्य चित्रकूट में आयोजित किसान मेले में प्रतिभाग किया।

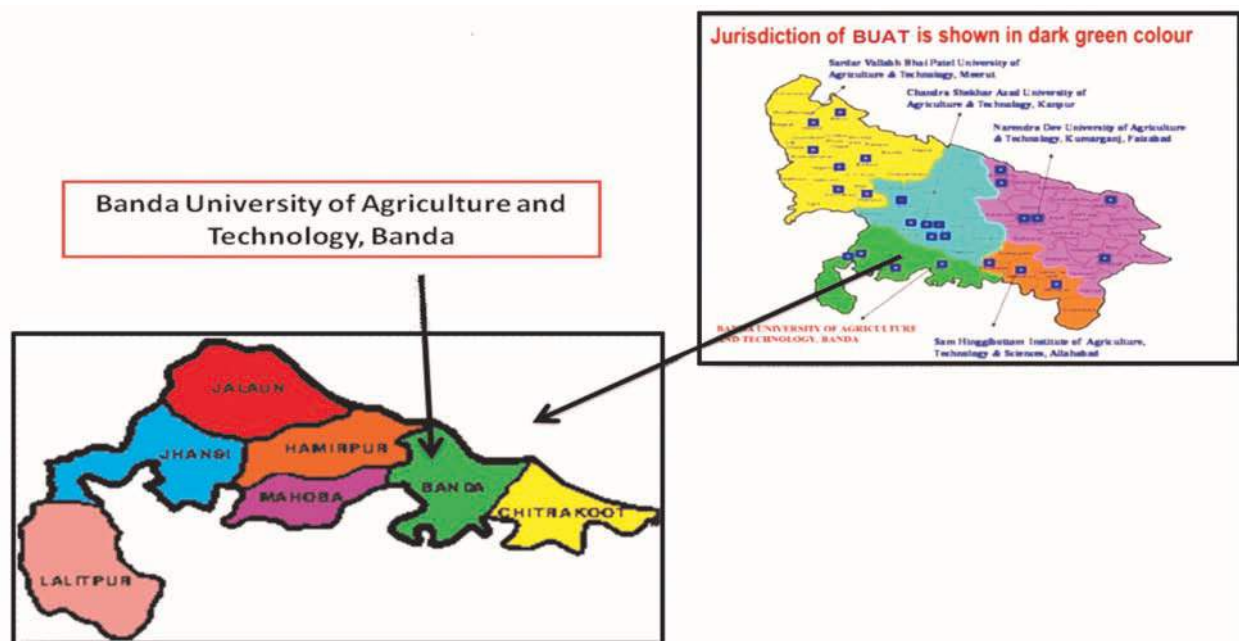
- दलहन, तिलहन, धान्य एवं मोटे अनाज की फसलों में क्रमशः 236 हे0, 197 हे0 एवं 60.4 हे0 क्षेत्रफल में तकनीकी प्रदर्शन किया। इसके अतिरिक्त सब्जियों में 10.65 हे0 के अन्तर्गत 11 एवं चारा उत्पादन तकनीकी के 2 तथा पशुपालन हेतु 8 प्रदर्शन का आयोजन किया गया।
- 11 विभिन्न विषयों (आई.एन.एम., आई.पी.एम., आई.डी.एम., आर.सी.टी. आदि) के अन्तर्गत कुल 44 प्रक्षेत्र परीक्षण किये गये। जिसमें 1245 लाभार्थी लाभान्वित हुये। पशुपालन प्रबन्धन मे 10 तकनीकियों का परीक्षण 66 लाभार्थियों के साथ किया गया।
- विश्वविद्यालय ने प्रथम बार यू.पी.कैटैट 2018 का आयोजन प्रदेश स्तर पर किया साथ ही प्रवेश हेतु आनलाइन काउंसिलिंग का प्रयोग किया।
- पियर रिव्यू टीम की संस्तुति के अनुसार आई.सी.ए.आर, नई दिल्ली ने कृषि एवं उद्यान महाविद्यालयों को मान्यता प्रदान की। आई.सी.ए.आर, नई दिल्ली द्वारा ही विश्वविद्यालय को कृषि विश्वविद्यालयों की सूची में 43वां स्थान प्रदान किया गया।
- आई.सी.ए.आर, अटारी, कानपुर के पूर्व निदेशक डा. यू.एस. गौतम ने 25.10.2018 को विश्वविद्यालय के तृतीय कुलपति के रूप में कार्यभार ग्रहण किया। हाल में ही डा. गौतम को आई.एस.ई.ई. (आई.ए.आर.आई., नई दिल्ली) का अध्यक्ष चुना गया है।
- विश्वविद्यालय ने सहायक प्राध्यापक डा. ऐश्वर्य महेश्वरी को चीन (अक्टूबर 2018) एवं यूनाइटेड किंगडम (मार्च 2019) की संस्थाओं द्वारा सम्मेलन में प्रतिभाग करने हेतु आमंत्रित किया गया।
- बुन्देलखण्ड क्षेत्र में दलहन की खेती को बढ़ावा देने हेतु विशिष्ट रूप से कृषि सखियों हेतु दलहन आधारित कृषि प्रणाली में कौशल वर्धन कार्यक्रम का आयोजन 28–30 नवंबर 2018 के मध्य विश्वविद्यालय किया गया।
- डी.ए.एस.डी., कालीकट, केरल द्वारा प्रायोजित एम.आई.डी.एच. की क्षेत्रीय कार्यशाला का आयोजन विश्वविद्यालय में 18–19 दिसम्बर 2018 के मध्य किया गया। जिसमें बुन्देलखण्ड क्षेत्र हेतु मसाला वाली फसलों के संवर्धन हेतु नीतियों के बारे में चर्चा की गयी।
- ए.एस.सी.आई., नई दिल्ली द्वारा माली एवं वर्मी कम्पोस्ट उत्पादन विषय में कौशल विकास हेतु प्रशिक्षण कार्यक्रम 1–30 जनवरी 2019 के मध्य आयोजित किया गया।
- कृषि एवं उद्यान महाविद्यालय में आई.सी.ए.आर.—जे.आर.एफ. परीक्षा हेतु एक प्रकोष्ठ की स्थापना की गयी है।
- मैनेज, हैदराबाद द्वारा प्रायोजित 21 दिवसीय प्रशिक्षण कार्यक्रम का आयोजन 5–25 फरवरी 2019 के मध्य किया गया। यह कार्यक्रम कृषकों की दुगनी आय करने हेतु उपयुक्त कृषि तकनीकियों के प्रयोग एवं प्रसार पर आधारित था।
- विश्वविद्यालय के 9वें स्थापना सप्ताह का आयोजन 2–7 मार्च 2019 के मध्य किया गया। श्री रणवेन्द्र प्रताप सिंह, मा0 राज्य मंत्री, कृषि शिक्षा एवं शोध, उ0प्र0 सरकार ने कार्यक्रम का उद्घाटन किया। इस अवसर पर विश्वविद्यालय के पूर्व कुलपति डा. एम.एस. औलख एवं आई.सी.ए.आर., नई दिल्ली के पूर्व उपमहानिदेशक (कृषि प्रसार) डा. सी. प्रसाद ने छात्रों को सम्बोधित किया।

University Portfolio

Banda University of Agriculture and Technology, Banda was established in the semi-arid landscape of Bundelkhand; on 2nd March, 2010 under Uttar Pradesh Agriculture University Act (revised), 1958 Gazette-Adhiniyam, 2010; to address the current and emerging challenges in agriculture and allied sectors in Bundelkhand region of Uttar Pradesh. The University has jurisdiction over Banda, Chitrakoot, Mahoba, Hamirpur, Jhansi, Lalitpur, and Jalaun districts. It is committed to serve the Bundelkhand region with trinity concept, i.e., complete integration of teaching, research and extension for the development of agriculture and allied sectors in order to ensure food security and enhance socio-economic status of farmers. The university is located on northern end of the city on Banda-Mahoba bypass, about six kilometres from Banda railway station and bus stand and spread over 948 acre of land. Out of the 948 acres, 348-acre land is allotted for infrastructural development and remaining 600 acres is earmarked for developing research farm to conduct research and devising innovative technologies in the agriculture and allied sectors.

Eleven colleges dealing with Agriculture, Horticulture, Forestry, Home Science, Veterinary

Science & Animal Husbandry, Agriculture Engineering & Technology, Agribusiness Management, Dairy Technology, Basic Sciences & Humanities, Food Science and Fisheries have been proposed in the master plan of the University. Presently, three colleges viz., College of Agriculture, College of Horticulture and College of Forestry are offering four-years undergraduate degree programmes. The undergraduate degree programme viz., B.Sc. (Hons) Agriculture and B.Sc. (Hons) Horticulture have been started in 2011 however, B.Sc. (Hons.) Forestry has been started in 2017. The Post Graduate degree programme viz., M.Sc. (Ag.) and M.Sc. (Horticulture) have been commenced since 2018. The four-years undergraduate degree programme in B.Sc. (Hons.) Home Science is going to start at College of Home Science from the academic session 2019-20. College of Agricultural Engineering & Technology and College of Veterinary Science & Animal Husbandry are under advanced stage of construction, other colleges i.e., Colleges of Food Science, Fisheries, Agribusiness Management, Dairy Technology and Basic Sciences & Humanities would be established in due course of time. Among these, College of Agriculture, College of Horticulture and College of Forestry are in operation.



Area of Jurisdiction of the University



University Map

Being the first Agricultural State University in the Bundelkhand region, BUAT is committed to contribute social and economic well-being of the people of Bundelkhand, Uttar Pradesh and the country through the pursuit of education, research, extension in agriculture and allied sectors. Board of Management, Academic Council, Research Council, Extension Council and Board of Studies are at the helm of affairs in the endeavor of making the University a significant and the highest seat of learning in higher education in agriculture and allied fields to realize its mandate.

Mission

The University is committed to the cause of Indian agriculture through its quality teaching, demand-driven and location-specific research and extension programmes in the light of dynamism of socio-economic and agro-ecological conditions, management perceptions, international trade scenarios and Government policies.

Mandate of the University

Teaching

- Creating human resource, particularly trained in agriculture and other allied sciences that may cater to the needs of 21st century.
- Preparing scientifically and technically sound graduates with entrepreneurial skills, which can provide the employment to unemployed rural and urban youth.

- Generating technically-sound youth who can apply their acquired knowledge and skills to diversify and industrialize agriculture for the socio-economic transformation of the rural society.
- Developing technical skills for coordinating agriculture with the industry.

Research

- Generating innovative agricultural technologies to make Indian agriculture globally competitive.
- Applying sources of scientific interventions to the solution of technical and practical problems of agriculture and allied aspects.
- Conducting basic research to accelerate the progress in agriculture and allied sectors with inputs of fundamental knowledge.
- Solving specific agriculture related problems being faced by farming community.
- Formulating specific package of practices for optimization of farmers' income of different holding sizes viz., large, medium, small and marginal.

Extension

- Disseminating innovative agricultural technologies among the farmers.
- Establishing partnership with growers/farmers, entrepreneurs and other stakeholders in agriculture for mutual benefits.
- Making the location specific agricultural technologies more demand-driven.
- Facilitating validation, demonstration and adoption of appropriate agro-technologies.
- Achieving economic and environmental sustainability through integrated management of productivity, production, marketing and the end use of farm produce.

Goals

The Government of Uttar Pradesh has assigned the responsibilities of:

- (a) Human resource generation and development,
- (b) Generation and perfection of technologies, and
- (c) Appropriate technology dissemination to the farmers, orchardists and dairy farmers.

In consonance with the objectives of the university to make provision for education mainly for rural people of the state of Uttar Pradesh in agriculture in its broad sense and to promote research and extension programmes in agriculture. The University has set for itself the following goals-

- Provide opportunities for the citizens of the state and the country for education in the field of agriculture in its broad sense and to promote research and extension programmes in agriculture and allied sciences.
- Establish the required infrastructure to conduct location specific research in the field of agriculture and allied sciences.
- Generate technologies to improve farm production and income of farmers.
- Provide the needed assistance to the development departments of the government and other agencies to test and disseminate the improved technologies developed.
- Provide opportunities for rural youth and women for learning and adoption of improved agro-technologies.
- Make quality seeds available to farmers in the region through focused research and extension programmes
- Revitalize the extension activities through the creation of specific infrastructure in each district.
- Adopt the advancements in information technology to improve the formal academic programmes and introduce non-formal distance and contact learning programmes for the benefit of farmers, farm women, rural youth and other stakeholders.

The University's mission and goals are, thus, clearly defined and focused on providing opportunities for higher education to the citizens, generating appropriate location-specific technologies for the benefit of the farmers, farm women, rural youth and other stakeholders and assisting them in the process of testing, fine tuning and ultimate adoption of these technologies. The University has established good infrastructure and signed MoUs with several ICAR Institutes, International Organizations, public and private sector institutes for the successful completion of the mission.

Governance

The Vice Chancellor is principal executive and academic head of the University and ex-officio chairman of Board of Management and Academic Council. Board of Management and Academic Council are the apex bodies, which take decisions on administrative, financial and academic matters. The authorities such as Academic Council, Technical Cell, Board of Studies, Comptroller, Research Council, Extension Council, Sports Board and various committees provide necessary recommendations/suggestions to facilitate the Board of Management to take appropriate decisions. The decisions taken by these two apex bodies are translated into action by respective functional heads. Matters pertaining to financial and budgetary aspects are channeled from Dean through Comptroller whereas those concerned with general administration are channeled through Director Administration & Monitoring. At present, Deans / Associate Dean coordinate the academic activities of the University and the constituent Colleges.

The regulation in respect of academic, administration especially pertaining to the students' admission and award of degrees are communicated through Registrar of the University. The action to be initiated in research and extension activities of the University are executed through Director of Research and Director of Extension, respectively while the students' co-curricular activities are monitored through Associate Dean Student's Welfare. The Nodal Officer (ICAR) channelizes the important role in between ICAR and the University for the academic excellence. The In-charge Counselling and Placement Cell helps in arranging the job placement to students of the University besides their career counseling. The activities pertaining to construction of buildings, maintenance of buildings and other physical facilities are monitored through the Estate Officer. The Security Officer takes care of the security of the university campus and the Librarian exercises overall control of the university library and organize their services in a manner that benefit to the needs of teaching, research and extension programmes of the University.

Organogram of the University



Authorities of the University

Board of Management (BOM)

The University is guided by a Board of Management, which is the policy making body and also responsible for the management of the University. The Vice Chancellor is the Chairman of the Board. The associated members including Principal Secretary, Agriculture Education and Research Department; Secretary, Higher Education; Principal Secretary, Finance; Director, Agriculture; Director, Animal Husbandry; one representative nominated by the Director General of Indian Council of Agricultural Research; two Members of Legislative Assembly (MLAs) of the state and two Members of Legislative Council (MLCs) of the state; two agricultural scientists having background of agricultural research or education; a progressive farmer; one women social worker; one agriculture industrialist.

Since its constitution, 19 meetings of BOM have been held till date. During the period under report i.e., 2018-19, two meetings of BOM were held (Table 1).

Table 1: Meetings of the Board of Management organized during the period of report

Sl. No	Meeting	Date	No. of participants
1.	18 th Meeting	23.04.2018	08
2.	19 th Meeting	01.09.2018	10

Crucial decisions have been taken in these two meetings are given as under:

- In the 18th meeting of BOM held on 23.04.2018, it was decided to approve the proposal for the commencement of two-year degree programme of M.Sc. (Forestry) in College of Forestry at BUAT, Banda. It was also decided to approve the advertisement of sanctioned posts of College of Home Science. Other decisions in the meeting included, approval of release of funds for levelling of farm area of the university, purchase of vehicle and offering the Maternity and Child Care Leave to the teaching and non-teaching women employee of the university.
- During the 19th meeting of BOM which was held on 01.09.2018, decision was taken to hold 4th convocation of the University. It was decided to accommodate the still vacant posts against advt. no. 01/2017, 02/2017 and 03/2017 in forthcoming advertisement. Approval on pay protection to the employees, who have experience during their previous employment, has also been decided. It was also decided that allotment of 8 acres land to Kendriya Vidyalaya Sangathan from the Master Plan of the university and the strength of the students in B.Sc. (Hons.) in College of Agriculture and College of Horticulture would be increased to 120 each from the academic session 2019-20.

Academic Council

Table 2: Meetings of the Academic Council organized during the period of report

Sl. No	Meeting	Date	No. of participants
1.	13 th	04.08.2018	13
2.	14 th	04.02.2019	17

Proceedings of 13th Academic Council

Adoption of B.Sc. (Hons) Agriculture & B.Sc. (Hons) Horticulture Degree Programmes in the Act, Statutes and Regulations of Banda University of Agriculture and Technology, Banda was presented to and approved by the Academic Council unanimously.

- It was discussed thoroughly and decided that seal of USID will be made in English & Hindi version and it will be stamped on the right side of the degree.
- The proposed list of students eligible for award of the degree of B.Sc. (Hons) Agriculture & Horticulture Batch 2013 and 2014 was presented to and approved by the Academic Council unanimously.
- The weight and other specifications on Gold, Silver and Bronze medals were presented to and approved by the Academic Council unanimously after suggesting the change in the existed weight of making similar weight of Vice Chancellor's Bronze Medal i.e., 40 to 50 g.
- The members of Academic Council discussed the various names as Chief Guest for the Fourth Convocation and it was unanimously accepted to propose the following names to Hon'ble Chancellor for his kind approval: (1) Shri M. Venkaiah Naidu, Vice Presidents of India (2) Prof. Ramesh Chand, Member of NITI Aayog (Government of India) (3) Dr. Trilochan Mohapatra, Secretary (DARE) & Director General (ICAR) (4) Dr. S. N. Puri, Ex-Vice Chancellor, Central University of Agriculture and Technology, Imphal.
- The Academic Dress Protocol for academic council members and students were presented to and approved by the Academic Council unanimously. As of earlier, the Maroon coloured UTTARIYA with golden embroidery will be used by Chief

Guest, the Chancellor and the Vice-Chancellor and the same with silver embroidery by the members of Board of Management and Academic Council and India Green coloured Uttariya by the students of B.Sc. (Hons) Agriculture and Lemon yellow coloured Uttariya by B.Sc. (Hons) Horticulture. Informal dress/casual dress/jeans will not be allowed in any case.

- The Course Structure and Course Content for M. Sc. Agriculture degree programme i.e., M.Sc. (Ag.) Agricultural Economics, M.Sc. (Ag.) Agricultural Extension, M.Sc. (Ag.) Agronomy, M.Sc. (Ag.) Entomology, M.Sc. (Ag.) Genetics & Plant Breeding, M.Sc. (Ag.) Plant Pathology and M.Sc. (Ag.) Soil Science & Agril. Chemistry were presented to the Academic Council and the same was approved by the Academic Council unanimously.
- The course code and titles have been proposed by the College of Horticulture regarding structure and course content for M. Sc. Horticulture degree programme i.e., M.Sc. (Horti) Fruit Science, M.Sc. (Horti) Vegetable Science, M.Sc. (Horti) Floriculture & Landscape Architecture and M.Sc. (Horti) Post Harvest Technology were presented to the Academic Council and the same was approved by the Academic Council unanimously.
- The MoU was signed in between Banda University of Agriculture & Technology, Banda and CDSL Venture Ltd. Course ID for B.Sc. (Hons) Agriculture, B.Sc. (Hons) Horticulture and B.Sc. (Hons) Forestry were presented to the Academic Council and the same was approved by the Academic Council unanimously.
- The reconstituted academic council as per the 5th Dean Committee Report was presented to the Academic Council and the same was approved by the Academic Council unanimously.
- The Course code and titles of B.Sc. (Hons) Forestry have been developed as per the 5th Dean Committee Report and communicated vide letter No.CoF/37/2018 dated 27.06.2018 after the approval of Board of Studies. The same were presented to the Academic Council and was approved by the Academic Council unanimously.

Proceedings of 14th Academic Council

- The Deans, Colleges of Agriculture, Horticulture & Forestry presented the proceedings of the meeting of “Board of Studies” regarding academic activities of the 2nd semester of Academic Session 2018-19 in detail. Hon’ble Chairman emphasized to invite research scientists/faculty of ICAR organizations for discussion of post graduate research assignment and to share their laboratories. Need based codal formalities regarding MoU between organizations will be made. Considerations of OCPA revision for UG and PG degree programmes as per ICAR 5th Dean’s Committee Report would be implemented unanimously.
- House unanimously agreed and approved to establish an independent and centralized Examination Cell of the University with full infrastructural and human resources, which will function in consultation with Registrar. Further, cell will be responsible for conduct the examination, evaluation and result preparation.

- House unanimously agreed and further approved revised rate for setting of one set of question paper of Rs. 800/- and 1000/- instead of Rs. 600/- and 800/-for UG and PG courses, respectively.

Faculty

The University has highly qualified and competent faculty of 71 members at present including 3 Professors, 18 Associate Professors and 50 Assistant Professors in its constituent colleges. The college wise faculty strength is given in Table 3.

Non Teaching Staff (Service Personnel)

The non-teaching staff provides necessary support for teaching, academic, research, extension, administrative and accounts matters for smooth implementation of all the activities of the University. At present University have 08 regular non-teaching employees and 22 outsourcing employees of different cadres.

Table 3: Faculty strength of the University

Sl. No	Name of the College	Name of the Post	Sanctioned	Filled	Vacant
1	College of Agriculture	Professor	2	2	-
		Associate Professor	14	12	2
		Assistant Professor	27	24	3
Sub Total			43	38	5
2	College of Horticulture	Professor	1	1	-
		Associate Professor	5	5	-
		Assistant Professor	12	12	-
Sub Total			18	18	-
3	College of Forestry	Professor	1	-	1
		Associate Professor	8	2	7
		Assistant Professor	14	14	-
Sub Total			23	15	8
Grand Total			84	71	13

Table 4: Non Teaching Staff of the University

Name of the Unit	Name of the Post	Sanctioned	Filled	Vacant
A. Administrative Non Teaching Posts on Deputation				
Registrar Office	Registrar	1	-	1
Comptroller Office	Comptroller	1	-	1
Total		2	-	2
B. Regular Non Teaching Posts				
Vice Chancellor Office	Personal Assistant	1	1	0
Registrar Office	Personal Assistant	1	1	0

Comptroller Office	Accountant	1	1	0
Pool System Personnel	Kanistha Lipik	2	2	0
Other	Sr Lab Asst	3	3	0
	Total	8	8	0
C. Outsourcing Posts				
PA		1	-	1
Stenographer		1	1	-
Junior Clerk cum Computer Operator		8	7	1
Junior Clerk		1	1	-
Horticulture Inspector		1	1	-
Mali		4	4	-
Peon		8	7	1
Driver		1	1	-
	Total	25	22	3
	Grand Total	35	30	5

University Budget

The University gets fund from State Government, ICAR and other agencies for teaching, research and extension programmes. The Comptroller is custodian of

the finances of the University. The University obtained financial assistance from ICAR for the first time during 2016-17. The budget head of the university during 2018-19 is elaborated in following tables 5 & 6.

Table 5: University budget during 2018-19 (Rs. in lakhs and per cent share)

Sl. No.	Head	2018-19	
		Amount	% share
1	Internal Resources	290.16	15.96
2	State Govt. Funds	1086.57	59.77
3	External Funds	441.13	24.27
	Total	1817.86	

Table 6: Head and Sub head wise grant during the period under report

Head	Sub head	Sub head wise grant (Rs. in lakh)	Amount (Rs. in Lakh)
Internal resources	-	290.16	290.16
State Govt. Funds	Salary	886.57	1086.57
	Non Salary	200.00	
External Funds	ICAR Grant	277.00	441.13
	Other Govt. agency projects	140.94	
	Private projects	14.24	
	Foreign funded projects	8.95	
Total		1817.86	1817.86

Infrastructure and Amenities

The University campus is in the development phase. Several college buildings, residences for staff, hostels, administrative building, sport complex, etc. have been completed during the period as per Master Plan of the University.

College Buildings

Three colleges viz., Agriculture, Horticulture and Forestry are implementing Under Graduate programme, however, the Colleges of Agriculture and Horticulture are engaged in Post Graduation too. In addition, the under graduate programme will initiate with upcoming batch from academic session 2019-20 at College of Home Science. The construction of College of Veterinary and Animal Husbandry (CoVSc & AH) building has been completed and initial batch will start for their degree programme in B.V.Sc. & A.H. after approval of VCI. Owing to lack of budget allotment for the construction of College building of Agricultural Engineering and Technology (CoAE&T), it could not be completed.

Each college is equipped with Dean’s Office with attached PA & Steno Room, Main Office for employees, Visitors’ Room, Computer rooms, Pantry Room and spacious Committee Room. In addition to these, a Counseling Hall along with Account office, HoD Offices, Departmental Office, Pantry room and stores for each department, Individual Faculty Rooms, Staff Rooms, a Multipurpose Hall and a Conference Room, Rooms for Lab Technicians and Lab Assistants, Store Rooms and a Canteen are also available.

Classrooms and Laboratories

Each college is provided with sufficient number of classrooms for UG and PG teaching separately including UG Lecture Hall, Instruction Rooms, Undergraduate Teaching Laboratories and Postgraduate Laboratories. Seminar rooms and Committee rooms are also available at department level in each college. In addition to well-furnished classrooms, there are smart classrooms too in each college equipped with LCD projector, computer with power back-up. Internet connectivity in each smart class room is yet to start.

Library and Other Learning Resources

The library is one of the most important centres of the University, which strengthen the teaching, research and extension programmes through knowledge bank. Both the faculty and students extensively use this facility. During the period under report, ARIS cell cum multimedia hall in the Central Library was inaugurated by the Hon’ble Vice Chancellor on December 12th, 2018. Now, the library is equipped with twelve new computers with good internet connectivity. Library has also got the acquisition to online e-journals, J-GATE (Agriculture & Biological Sciences) and subscribed 122 e-books. This facility is available for the students and faculty members to access the desired information. A total of 2251 Print books have been purchased this year making the total number of print books to 8526 (Table 7). Central Library of BUAT Banda became fully air-conditioned during 2018-19. Xerox Machine is also available in the library for photocopying services on the payment basis.

Table 7: List of holdings in the University Library

Sl.No.	Items	Number
1	Text Books	8526
2	Manuals	77
3	e-books	122
4	e-journals (full text)	1742
5	e-journals (abstracts)	1165
6	Print Journals (free)	214
7	Magazines (regular)	17
8	Daily News Papers	05
9	Others (Annual reports, periodicals, etc.)	408

Residential buildings

Vice Chancellor’s residence equipped with modern amenities. Two units of Type IV residential buildings for university employees, each has six flats. Besides this, one unit of Type III having 12 flats and Teacher’s Hostel having 24 single rooms and 12 suits are also functional.



Hostels

Currently four boy's hostels are being used to provide accommodation for the students. The construction work of a new hostel has been finished and the accommodation in this new hostel will be started from the academic session 2019-20. Each hostel has the capacity to accommodate 120 students. All the hostels are spacious and equipped with modern facilities. The Hostel messes are running on cooperative basis by the students.



Table 8: Availability of Rooms and Students Housed in Hostels

Hostel	No. of Rooms	Students Accommodation Capacity
Hostel No. 1 (Varsha)	53	120
Hostel No. 2 (Sharad)	53	120
Hostel No. 3 (Hemant)	53	120
Hostel No. 4 (Basant)	53	120
Hostel No. 5 (Shishir)	53	120

Agro-meteorological observatory

Weather has a direct and indirect effect on crop production. In this context, the regular observation of weather is essential to investigate the relationship between crop and weather precisely and quantitatively. Recording the weather phenomena is essential to know the exact relation between climate of a region and the kinds of plants. Considering the importance of weather and climate, university has established an observatory



during 2017 and it is equipped with all necessary instruments. Presently, a crop weather advisory group has been constituted by experts of different fields of specialization and this group releases the advisory to the farmers on the basis of concurrent weather parameters.

Vermi-compost unit

The growing demand of organic farming requires the production of organic inputs at farm level. In this series, a vermi-compost unit was already established for the production of vermi-compost and multiplication of earthworms. During the period under report, the portable compost pits were provided to each hostel to produce vermicompost on regular basis by hostel inmates. The produced vermicompost will be used during plantation drives inside the university campus.

Apiculture unit

An apiary has established to demonstrate beekeeping among students and farmers as well as to tap the potentialities of beekeeping in Bundelkhand region. Research projects related to beekeeping and allied sectors are running under the Department of Entomology, CoA.

Mushroom production unit

Mushroom laboratory has established under Experiential Learning Programme to develop the entrepreneurial skills of spawn and mushroom production among students and farmers of Bundelkhand region in the Department of Plant Pathology, CoA.

Water & Electricity

The university has well established 33/11 KVA Electricity Substation for regular supply of electricity. The university has also a central R.O. plant with 10000 liters storage capacity for supply of drinking water. Now the pipe line of drinking water has been well connected from the RO plant to the hostels.

Solar Power Plant System

BUAT campus follows the green energy concept to meet out the climatic challenge in power sector and

ecological perspective. Different instruments viz., solar street lights and solar pumps etc. operated through solar system have currently installed to tap the solar energy in the campus and in out campus centers. A solar power plant with the capacity to produce 652 KW electricity has been installed by Clean Max Pvt. Ltd., Mumbai on the rooftop of the buildings of different colleges and administrative block. The system was inaugurated by the Hon'ble Governor Shri Ram Naik on 26th September, 2018. Four solar pumps of 2 hp capacity were purchased from UPNEDA, Banda and installed at the university campus and KVKs (Jhansi and Mahoba). In addition, 150 street lights were also purchased from UPNEDA, Banda and installed at the campus and KVKs (Jhansi, Lalipur, Mahoba, Jalaun and Hamipur).



Inauguration of Solar Power Plant by Hon'ble Governor, Uttar Pradesh

Agriculture farm Development

Agriculture farm has already been developed behind the Colleges of Agriculture and Horticulture in an area encompassing about 20.0 ha. The wild plants of babool and other bushes were cut and the cleaned area has leveled for the purpose of cultivation of crops. Different crops viz., sesame, pigeonpea, moong bean, mustard, chickpea were sown for seed/grain purposes. The certain area has also been allotted to the students of undergraduate programme under Practical Crop Production.

Horticulture farm Development

During 2018-19, four orchards were developed in different blocks under the Department of Fruit Science. The plantations of kinnow (*C. deliciosa*), sweet orange (*Citrus sinensis*), lime, lemon (*Citrus limon*), moringa (*Moringa oleifera*), pomegranate (*Punica granatum*),

aonla (*Emblica officinalis*) and phalsa (*Grewia subinequalis*), dragon fruit (*Hylocereus undatus*), lime, lemon, fig (*Ficus carica*), and karonda (*Carissa carandas*), chirongi, jamun (*Scizium cumini*), guava (*Psidium guvajava*), mango (*Mangifera indica*), mahua (*Madhuca longifolia*), tamarind (*Tamarindus indica*), custard apple, ber (*Ziziphus mauritiana*), bael (*Aegle marmelos*), manila tamarind (*Pthecellobium dulce*) and khirni (*Manikara hexandra*) were done in an area of 2.42 ha.

Fruit nursery has also started behind the College of Horticulture building. Nursery is in establishment stage, whatever the plants produced in the nursery are being utilized for plantation as main crop, hedge row, filler plants in the orchard and for propagation of collected material. Commercial propagation of vegetative propagated plants will be started after completion of juvenility in newly established mother progeny plants.

Ken irrigation project

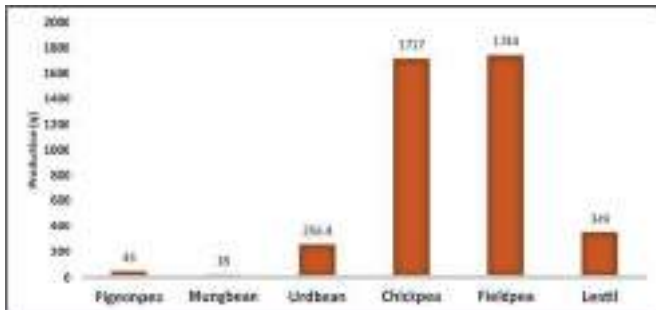
A project is operational with the help of state government to lift the water from Ken river for irrigation of the fields of university campus. Total budget of this project is Rs. 1874.86 lakh and the fund released was Rs. 1425 lakh. After releasing of funds, the land acquisition for head works has been completed and the same for laying of HDPE line for conveyance is in progress. The installation of 33/ 0.44 kV substation has been completed for supply of electricity for pump house. The construction of staff quarters, store room, fencing & hand-pump, erection of barge and installation of crab winch are completed. Earth work for slope structure including excavation and maintaining of slope is completed. Procurement of pipes for lifting on head and distribution in BUAT campus has completed.

Seed Hub



Inauguration of Seed Hub by Hon'ble Agriculture Minister, Govt. of UP

The university has started the production, processing and distribution of quality seeds of urd, moong, pigeonpea, chickpea and lentil to the farmers with the establishment of seed hub at the university campus and KVKs. The seed production of pulses is being taken at both farm and farmers field as participatory seed production programme in all the season of the year. The total seed production of pulses during Kharif, 2018 and Rabi, 2018-19 from all seed hubs of BUAT, Banda is given hereunder.



Farm Ponds

“Farm Pond Scheme” was launched by Govt. of U.P. to mitigate the effect of drought in the Bundelkhand region of U.P. The funding for the same was provided under Rashtriya Krishi Vikas Yojana (RKVY). The farm ponds of 22×20×3.5-4.5m dimension helped to recharge the underground water and also catered the need of irrigation at university farms. The expansion of the development of agricultural farm was also possible with the help of available water from these ponds.

Determining Wildlife Occurrence

The Department of Wildlife Sciences, College of Forestry has initiated determining preliminary status of key wildlife species within the BUAT campus. Occupancy surveys followed by opportunistic camera trapping have been followed initially. As of now, hyena (*Hyaena hyaena*), jackal (*Canis aureus*), nilgai (*Boselaphus tragocamelus*), porcupine (*Hystrix indica*), small Indian civet (*Viverricula indica*) and more than 60 species of birds such as white rumped vulture (*Gyps bengalensis*), painted stork (*Mycteria leucocephala*),

bronze-winged jacana (*Metopidius indicus*) and Uttar Pradesh State Bird sarus crane (*Antigone antigone*) have been recorded.

Cafeteria

A modern Cafeteria has already been established in a large Hall with a capacity of 300 on the ground floor of the building of College of Agriculture. Sanitation and food quality is regularly monitored by the Committee of faculty members and students.

Medical Facilities

A Small four-bed Health Clinic has already been established in the College of Agriculture building for providing health services to the students, employees and officers of the University under the supervision of a part time Medical Officer. Health camps were also organized by the office of Dean Students' Welfare to check the health status of the students and staff of the university

Sports Stadium

A stadium has already been developed for the sports activities. Students play different games under the supervision of trained faculties. Furthermore, amenities required for various sports activities have also strengthened during the period under report.

Convenience Centre

The various articles e.g., fooding, clothing, stationary, etc. are required by the students and faculty members in daily life. To meet out these demands, a convenience centre has been established inside the university campus. Departmental store, canteen, hair salon, laundry, etc. were arranged to facilitate the hostel inmates and staff members.

Bank

A branch of Punjab National Bank has established to facilitate the banking related activities inside the university campus. An ATM has also installed at convenience centre.



Constituent Colleges

College of Agriculture



The College has started to provide impetus to agricultural development in the region and upliftment of rural communities in Bundelkhand region. The undergraduate programme B.Sc. (Hons) Agriculture was started in 2011. The PG programmes in various disciplines of agriculture have started from the session 2018-19. At present, 41 faculties including two Professors, 14 Associate Professors and 25 Assistant Professors are involved in teaching, research and extension activities. The College provides excellent academic environment for developing the practical skills among students.

Degree Programme

The College has been offering undergraduate degree programme i.e., B.Sc. (Hons.) Agriculture since 2011 and postgraduate programmes in 7 disciplines have also started in the College from academic session 2018-19.

Table 9: Students enrollment in UG Degree Programme in the academic session 2018-19

Degree Programme	Intake Capacity (University+ICAR)	Actual Enrollment
B.Sc. (Hons.) Agriculture	61	61*

*Including one foreign student

Table 10: Students enrollment in PG Degree Programmes in the academic session 2018-19

Degree Programme	Intake Capacity (University+ICAR)	Actual Enrollment
M.Sc. (Ag.) Agronomy	05	06*
M.Sc. (Ag.) Soil Science and Agricultural Chemistry	05	04
M.Sc. (Ag.) Plant Pathology	05	05
M.Sc. (Ag.) Entomology	05	04
M.Sc. (Ag.) Genetics and Plant Breeding	05	04
M.Sc. (Ag.) Agricultural Economics	05	02
M.Sc. (Ag.) Agricultural Extension	05	05

*including one foreign student

Meetings of Board of Studies

The Board of Studies (BoS) was constituted in College of Agriculture vide letter No. 471/BUAT/reg/2016 dated 07/09/2016 and has restructured as per ICAR guidelines. The major recommendations of the BOS of the College are as follows:

7th Meeting of Board of Studies (August 3rd, 2018)

Major Recommendations

1. The committee has discussed the requirement of credits for post graduate programme, the minimum credit requirements for the M. Sc programme in each department shall consist of following subjects

Subject	Master Programme
Major	20
Minor	09
Supporting	05
Seminar	01
Research	20
Total credit hours	55
Compulsory non-credit courses	Total 6 credit hours from six courses

Major subject: The subject (department) in which the students takes admission.

Minor subject: The subject closely related to students major subject (e.g., if the major subject is Entomology, the appropriate minor subjects should be Plant Pathology & Nematology).

Supporting subject: The subject not related to the major subject. It could be any subject considered relevant for student's research work.

Non-Credit Compulsory Courses: Six courses (PGS 501-PGS 506) are of general nature and are compulsory for Master's programme.

2. All the Seven Post graduate programmes have been adopted as per ICAR recommend course curricula.
3. Uniformly a course of Experimental Statistics having 4 credits (3+1) will be adopted with little modification as per the need of all post graduate course programme. Similarly, a course *Introduction to Computer, Fundamental & Programming* will be adopted under supporting course.
4. In the course programme of M.Sc. Ag. Agronomy, Oilseed crops will be added in Course no. AGRON-506 (Agronomy of Major Cereals and Pulses) for considering the requirements of Bundelkhand region.
5. The Plant Biochemistry/Plant Physiology/

Biotechnology are included as minor/supporting subjects for fulfill the requirement of PG programmes in GPB/Entomology/Pathology and also for other disciplines as per their need.

6. The no dues form for students should be revised.

8th Meeting of Board of Studies (January 1st, 2019)

Major Recommendations

1. The terms and condition for the eligibility criteria for guiding of M.Sc. students as per the approved recommendations.
2. The adoption of PG forms as per CSAUT, Kanpur for PG students.
3. Supplementary exam may be conducted within month and students should be allowed to appear in any 2 repeated subjects and evaluation procedure should be adopted as per 5th Deans' committee report of ICAR.
4. The English course is added as mandatory subject for UG/PG.
5. The weekly interaction with UG students and their respective advisors is mandatory.
6. To develop quality thesis, the co-guide/ member may be taken from the respective institutes as per rules of MoU signed.



Dr. S.N. Puri, Former Vice Chancellor, CAU, Imphal visiting Department of Entomology

Faculty Positions

Table 11: Department wise strength of faculty members

Sl. No	Department	Professor			Associate Professor			Assistant Professor			Total		
		S*	F*	V*	S*	F*	V*	S*	F*	V*	S*	F*	V*
1	Agronomy	1	1	-	3	3	-	4	4	-	8	8	-
2	Genetics and Plant Breeding	1	1	-	3	1	2	3	3	-	7	5	2
3	Soil Science & Agricultural Chemistry	-	-	-	2	2	-	3	3	-	5	5	-
4	Entomology	-	-	-	3	3	-	3	2	1	6	5	1
5	Agricultural Economics	-	-	-	1	-	1	2	1	1	3	1	2
6	Agriculture Engineering	-	-	-	-	-	-	1	1	-	1	1	-
7	Plant Pathology	-	-	-	2	2	-	3	3	-	5	5	-
8	Agricultural Extension	-	-	-	1	1	-	4	3	1	5	4	1
9	Crop Physiology	-	-	-	-	-	-	1	1	-	1	1	-
10	Statistics & Computer Science	-	-	-	-	-	-	2	2	-	2	2	-
11	LPM	-	-	-	-	-	-	1	1	-	1	1	-
	Total	2	2	-	14	12	2	27	24	3	43	38	5

*S= Sanctioned *F= Filled *V= Vacant

Faculty Development

The college is continuously finding new avenues to upgrade the academic standards of teaching, research and extension. College always motivates its faculty to participate in the various capacity development programmes, seminars, workshops etc. organized by different organizations. The experience gained through such programmes has been effectively utilized in teaching programme and also for developing research proposals. During the period under report total 55 faculties have participated in various capacity development programmes inside and outside the university campus.

Students' Achievement

Total 48 students of the fourth batch (2014) of B.Sc. (Hons.) Agriculture passed with the first division in the session 2017-18. They have been awarded degrees in the Fourth Convocation of the University held on September 26th, 2018. Three students of the college received the University Medals for academic excellence, while 21 students received Merit Certificate for their academic achievement.

Table 12: University Medalist during Fourth Convocation

Sl. No.	Name of Students	ID. No.	OCPA	Degree Programme	Medals
1	Harsh Chaurasia	335	8.943	B.Sc.(Hons) Agriculture	Gold Medal
2	Deepak Kumar	300	8.813	B.Sc.(Hons) Agriculture	Silver Medal
3	Anuj Mishra	303	8.681	B.Sc.(Hons) Agriculture	Bronze Medal



Award of Medal and Degree Certificate during 4th Convocation by Hon'ble Governor, Uttar Pradesh

- Out of total 48 students passed out from the College, 42 students have enrolled for their Post Graduate

studies at AMU, Aligarh; Allahabad University, Allahabad; SVPUAT, Meerut; CSAUA&T, Kanpur; NDUAT, Faizabad; Rani Lakshmi Bai CAU, Jhansi; CAU, Imphal; RPCAU, Samastipur; BBU, Lucknow; Bundelkhand University after qualifying different competitive exams within and outside the state.

- One of the PG students named Mr. Shivam Singh from Department of Soil Science has participated and presented a poster and ranked second in All India Post Graduate Students' Research Convention in Soil Science held at Bihar Agricultural University,

Sabour, Bahagalpur (Bihar) during March 15-16, 2019.

- As a part of University Cultural Team, 12 students of the college participated in 19th All India Agricultural Universities Youth Festival held at Sardarkrushinagar Dantiwada Agricultural University, Gujarat.
- Students of the college also participated in different sports and cultural events organized during 9th Foundation Week Celebration of the University from March 2nd to 7th, 2019.

Experiential Learning Programme

Title of Project	PI/ Co-PI	Year of commencement	Total Grants received (Rs.)	Name of Funding Agency
ELP on Development of entrepreneurship skills through spawn and mushroom production	1. Dr. Durga Prasad, In-charge/ Manager 2. Dr. V. K. Singh, Managing Director 3. Dr. G. S. Panwar, Chief Executive Officer 4. Dr. H. S. Negi, Associated Faculty	2019	37.00 lakh in FY 2018-19	ICAR, New Delhi

Laboratories

The College has 8 well equipped UG laboratories in Department of Genetics and Plant Breeding, Soil

Science and Agricultural Chemistry, Entomology, Agricultural Engineering, Agricultural Extension and two in the Department of Plant Pathology. A list of major equipments available in these labs is given below:

Scientific equipments available with UG/PG laboratories including ELP:

Genetics and Plant Breeding	
Centrifuge (Table top centrifuge)	Centrifuge (Mini centrifuge)
Centrifuge (Mini centrifuge)	Vortex (Mixture)
Vortex (Mixture)	Micropipette 0.5- 10µl, fully autoclavable
Micropipette 0.5- 10µl, fully autoclavable	Micropipette 2-20µl, fully autoclavable
Micropipette 2-20µl, fully autoclavable	Micropipette 10-100µl, fully autoclavable
Micropipette 10-100µl, fully autoclavable	Micropipette 100-1000µl, fully autoclavable
Micropipette 100-1000µl, fully autoclavable	Electrophoresis Unit Midi Horizontal
Electrophoresis Unit Midi Horizontal	Power supplies Output pack-4
Hot Plate	Digital Timer and Thermometer Digital
Culture racks	Water bath
Microscope	Refrigerator
Centrifuge (Table top centrifuge)	Laminar Flow
Entomology Lab	
Aspirator	Corcyra egg cleaning device grain and chaffer separator
Insect specimen tube box	Electronic Balance
Microscope (Monocular & Bionocular)	Insect storage box
Microscope (Trinocular)	Insect collection net
Knapsack sprayer	Insect killing jar
Mist blowers and duster	Insect stretching board

Power sprayers	Insect cage
Hand compression sprayers	Insect showcase cabinet
Foot sprayer	Corcyra egg sterilization chamber (UV)
High pressures knapsack sprayers	Insect display & storage showcase
Light Trap	BOD
Refrigerator	
Crop Physiology Lab	Agricultural Extension
Double distillation unit	Epson EB 520 LCD Projector
Incubator	Panasonic PV 100 Video Camera
Water bath	Sony Handycam
Incubator shaker	Nikon 7000 DSLR Camera
Microscope	Epson 580 Color Photo Printer
Electrical balance	PA system (With amplifier and sound box)
Leaf area meter	SLR Digital still camera
	Display Board
Agricultural Engineering Lab	Bulletin Board
Tractor with two wheeler trolley	
Tractor drawn seed cum fertilizer	Soil Science and Agricultural Chemistry
Tractor drawn disc plough, disc harrow, disc type bund former, cultivator (11-tynes), scraper, 6- row inclined plate planter, Ridge Maker, Auger, Digger, Mould Board Plough	pH Meter
	EC meter
	Flame photo Meter
	Spectrophotometer
Pedal cum power operated grain cleaner cum grader	Rotary Shaker
Manually operated groundnut decorticator	Water Distillation Unit
	Atomic Absorption Spectro Photometer
Octagonal maize sheller	Oven
	Nitrogen Kjeldal Assembly
Twin wheel hoe weeder	Plant Pathology (ELP-Mushroom)
Cage wheel	Hot air oven
Rotavator	Deep freezer
	Laminar air flow
	Hot air oven
	Autoclave
	BOD Incubator

Scientific equipments available under Centre of Excellence in Dryland Agriculture

1. Hot Air Oven	15. Deep Freezer (-20 & -80 degrees),
2. Vertical Autoclave	16. Refrigerated Centrifuge,
3. BOD incubator, Refrigerator	17. Water bath,
4. Camera	18. Fume Hood,
5. Commercial mixer grinder	19. Autoclave,
6. Hot Air Oven	20. Ice flaking Machine,
7. Vertical Autoclave	21. Spectrophotometer,
8. BOD incubator	22. RT-PCR,
9. Refrigerator	23. Chlorophyll Meter,
10. Camera	24. Oven,
11. Commercial mixer grinder	25. Ultrapure water purification system,
12. Thermocycler,	26. Magnetic Stirrer,
13. Electrophoresis Unit,	27. Cryocan,
14. Gel Documentation System,	28. Microscope etc.

Computer Lab

A Computer Lab having 31 Desktop Computers with printer, projector and 10 KVA UPS has been made operational in the College building to educate and train the students in computer applications. Internet connectivity has also been provided for e-communication and access to worldwide knowledge.

Students Education Farm

A multi-disciplinary Students Education Farm spread over an area around 1.5 acre had been allotted to the students to grow field crops. This facility is important part of any agriculture university where the UG students obtain practical field training and learn the complete process of crop production from sowing to harvesting. Students of B.Sc. (Hons) Agriculture degree programme had sown moong during Kharif and mustard during Rabi season under Practical Crop Production (PCP) course. A



Students engaged in agricultural operation at Education Farm

total of 53 students were engaged under 9 groups, they produced 233.88 kg moong and 691.45 kg mustard.

Student READY / In-plant Training / Internship / Experiential Learning Programme

A total of 20 credits are mandatory for B.Sc. (Hons) students under Rural Agriculture Work Experience (RAWEX) Programme. The programme is funded by ICAR and the state government. The duration of the programme is 20 weeks. During the period students conducted practical and visited research and extension institutions, dairy farms and private and public nurseries, food processing units etc. Students were attached with different KVKs under University jurisdiction. An All India Educational Tour was also organized; students visited various ICAR institutes viz., IGFRI, CAFRI, IARI, IIWBR, NDRI and GBPUAT, Pantnagar.

Organization of Summer / Winter schools & Seminar / Workshop

Different programmes viz., workshop, training, winter school etc. were organized at the university campus for the sake of capacity development (Table 14). A huge number of participants were participated from different states in these programs. In addition, total 97 faculties have participated as resource person in various programmes conducted by different colleges inside the university as well as by other agencies.

Table 13: Summer School/Winter School/ Seminars /Symposia/Workshop/Training Course organized

Sl. No.	Title	Name of Department	Name of Course Coordinator	Duration	
				From	To
1	Training Course for rural women on <i>Dalhan Adharit Krishi Pranali mein Kaushal Vardhan</i>	Agricultural Extension	Dr. B.P. Mishra	Nov 28, 2018	Nov 30, 2018
2	MIDH- Regional level workshop on 'Harnessing the potential of spices production in Bundelkhand region of Uttar Pradesh: Issues and Strategies'	Agricultural Extension	Dr. B.P. Mishra	Dec 18, 2018	Dec 19, 2018
3	Skill development programme – Gardener	Agricultural Extension	Dr. B.P. Mishra	Jan 1, 2019	Jan 30, 2019
4	Skill development programme – Vermicompost Producer	Agricultural Extension	Dr. B.P. Mishra	Jan 1, 2019	Jan 30, 2019
5	Winter School on Appropriate Agricultural Technologies and Extension Approaches for Doubling Farmers' Income	Agricultural Extension	Dr. B.P. Mishra, Dr. B.K. Gupta	Feb 5, 2019	Feb 25, 2019
6	Workshop on CeRA	University Library	Dr. Kamaluddin	Feb 26, 2019	--
7	District Level Farmers' Training for promotion of spices production in Bundelkhand region at KrishiVigyan Kendra, Hamirpur	Agricultural Extension	Dr. B.P. Mishra	Mar 16, 2019	--
8	District Level Farmers' Training for promotion of spices production in Bundelkhand region at KrishiVigyan Kendra, Lalitpur	Agricultural Extension	Dr. B.P. Mishra	Mar 27, 2019	--

Farmer/Students visits to college

Table 14: Visits of Farmers/Students to the college campus

Sl. No	Department	Date	Topic	Faculty
1	Bhagvat Prasad Memorial Inter College Shrinath Bihar Chilla Road Banda	01-09-2018	Education Tour	Dr. S.B. Singh, Dr. Pankaj Kumar Ojha
2	Prathmik Vidyalaya Pachulla Banda	05-12-2018	Education Tour	Dr. Jugul Kishor Tiwari
3	Government Inter College Mahudha, Hamirpur	29-12-2018	Education Tour	Dr. Deo Kumar Dr. S.B. Singh
4	Government Inter College Mataundh, Banda	03-01-2018	Education Tour	Dr. Deo Kumar Dr. Mayank Dubey
5	Government Girls Inter College, Hamirpur	10-01-2019	Education Tour	Dr. J. Pathak Dr. B. P. Mishra Dr. C.M. Singh Head KVK, Banda
6	Government Girls Inter College Sumerpur, Hamirpur	11-01-2019	Education Tour	Dr. Jugul Kishor Tiwari
7	Government Girls High School Ballan, Banda	22-01-2019	Education Tour	Dr. Jugul Kishor Tiwari Dr. C.M. Singh Dr. Mayank Dubey
8	Group of Students, KCNIT, Banda- Visit farm, crop Cafeteria and class and lab of departments.	13.08.18	Knowledge imparted about university, crops, implements, and lab utensils	Dr. S. B. Singh
9	Bhagwat Prasad Memorial Inter College- Visit farm, crop Cafeteria and class and lab of departments.	01.09.18	Knowledge imparted about university, crops, implements, and lab utensils	Dr. S. B. Singh
10	Student of Mawai higher secondary school, Banda- Visit farm, crop Cafeteria and class and lab of departments.	21.12.18	Knowledge imparted about university, crops, implements, and lab utensils	Dr. S. B. Singh
11	Student of Government High School Reevan, Maudaha, Hamirpur- Visit farm, crop Cafeteria and class and lab of departments.	24.12.18	Knowledge imparted about university, crops, implements, and lab utensils	Dr. S. B. Singh
12	Rajkiya Balika Inter college, Maudaha, Hamirpur- Visit farm, crop Cafeteria and class and lab of departments.	29.12.18	Knowledge imparted about university, crops, implements, and lab utensils	Dr. S. B. Singh

Awards

Table 15: List of awardees by various societies/organizations

Sl. No.	Name of Award	Awarding Agency	Name of awardee	Year
1	Distinguished Scientist Award	AED Society, Allahabad, UP, India	Dr. Kamaluddin	2018
2	Distinguished Scientist Award	ATD Society Meerut, U.P. India	Dr. Kamaluddin	2018
3	Excellence in Teaching Award	Astha Foundation, Jaipur, Rajasthan India	Dr. Kamaluddin	2018
4	Best Scientist Award	The Society of Agricultural Professionals, Kanpur	Dr. Narendra Singh	2018
5	Best Extension Award	Society for Upliftment of Rural Economy (SURE), Varanasi	Dr. Pankaj Kumar Ojha	2018
6	Young Scientist Award	Society of Extension Education, Agra	Dr. Bhanu Prakash Mishra	2018
7	Best Extension Professional Award	Society of Extension Education, Agra	Dr. B.K. Gupta	2018
8	Young Scientist Award (ICAAAS-2018)	Biologix Research and Innovation Centre Pvt. Ltd. (INDIA)	Dr. M.K. Mishra	2018

College of Horticulture



The College of Horticulture started in the year 2011 as an important component of the Banda University of Agriculture and Technology (BUAT) with all three missions reflected in the Land-grant institutions: Teaching, Research and Extension. The goal of College of Horticulture is education and pursuance of fundamental and applied research in Horticulture to foster farmers' communities through extension of modern technologies in surrounding areas for their upliftment. The College of Horticulture is fulfilling the mission through the excellent

and innovative work of outstanding faculty, staff, and students. The current faculty strength in college is 18 including one Professor, five Associate Professors and twelve Assistant Professors for supporting students in teaching, research and various co-curricular activities. The college of Horticulture has 6 major departments *i.e.*, Vegetable Science, Fruit Science, Post Harvest Technology, Floriculture & Landscape Architecture, Basic Sciences and Social Science.

Faculty Positions

Table 16: Department wise strength of faculty members

Sl. No	Department	Professor			Associate Professor			Assistant Professor			Total		
		S*	F*	V*	S*	F*	V*	S*	F*	V*	S*	F*	V*
1	Fruit Science	-	-	-	1	1	-	2	2	-	3	3	-
2	Vegetable Science	1	1	-	2	2	-	3	3	-	6	6	-
3	Post Harvest Technology	-	-	-	1	1	-	2	2	-	3	3	-
4	Floriculture & Landscape Architecture	-	-	-	1	1	-	2	2	-	3	3	-
5	Basic Sciences	-	-	-	-	-	-	1	1	-	1	1	-
6	Social Science	-	-	-	-	-	-	2	2	-	2	2	-
	Total	1	1	-	5	5	-	12	12	-	18	18	-

*S= Sanctioned *F= Filled *V= Vacant

Board of Studies

Sl. No.	Date of Meeting	Agendas of Meeting	Recommendations
1.	23.06.2018	Shifting of courses from first semester to avoid course load of advanced course	Relatively tougher courses from First semester of 1 st Year will be shifted/interchange to 2 nd & 3 rd Year course through Academic Council approval.
2.	27.12.2018	Finalization of different Pro-forma Required for PG Program, Alteration in the syllabus of UG/PG courses taught as per the 5 th Dean Committee, Proposal for introduction of supplementary exam for repeat students in UG & PG courses	Discussion was held regarding finalization of different proforma required for PG program, Alteration in syllabus of UG/PG courses taught as per the 5 th Dean Committee and supplementary exam for repeat students in UG & PG courses and further submitted to academic council for discussion and approval.

Degree Programme

The College has been offering undergraduate degree programme i.e., B.Sc. (Hons) Horticulture of four years duration since 2011. The post-graduate programmes in four disciplines, viz. Vegetable Science, Fruit Science, Floriculture and Landscape Architecture and Post Harvest Technology were also started from the academic session 2018-19.

Table 17: Students enrollment in UG Degree Programme in academic session 2018-19

Degree	Intake Capacity (University+ICAR)	Actual Enrollment
B.Sc. (Hons.) Horticulture	61	59

Table 18: Students enrollment in PG Degree Programme in academic session 2018-19

Department	Intake Capacity (University)	Actual Enrollment
M.Sc. (Hort.) Fruit Science	05	04
M.Sc. (Hort.) Floriculture	05	02
M.Sc. (Hort.) Post Harvest Technology	05	03
M.Sc. (Hort.) Vegetable Science	05	04

Faculty development

The Faculty of the College is constantly motivated to enhance their academic and research skills through participation in the various Capacity Development Programmes, seminars, workshops etc. organized by other agencies/organizations. The experience gained through faculty development has been effectively utilized in teaching programme and also for developing research proposals. During the period under report total 20 faculties have participated in various capacity development programmes inside and outside the university campus.

Laboratories

The College has well equipped laboratories namely Vegetable Science Lab, Fruit Science Lab, Floriculture Lab, Agrometerology Lab, Biochemical Analysis Lab and Post Harvest Lab. These laboratories have been equipped for effective teaching and conduct of basic and applied research in different disciplines. Biochemical Analysis Lab and Post Harvest Lab were established during the period under report.

Scientific equipments available in the College Labs

Sl. No.	Name of Equipments
Department of Fruit Science	
1	Falcon Premium hoe
2	Garden shovel
3	Premium garden shovel
4	Garden Rake
5	Sword
6	Pron G Cultivator
7	Folding ladder
8	Pruning knife
9	Edging knife
10	Tree pruner
11	Grass shear
12	Lopping shear
13	Knap-sack Sprayer
14	Mango harvester
15	Wheel Barrow
Department of Post Harvest Technology	
1	Fruit juice extractor
2	Fruit crusher
3	Juice blender/stirrer
4	Hand Refractometer
5	Fruit pulper
6	Crown corking machine
7	Polythene bag sealer
8	Cabinet dryer
9	Weighing balance
10	Gas burner
11	Food Processor
12	Vegetable cutting Machine
13	Soxhlet Apparatus
14	Stainless steel utensils
15	Plastic packaging materials and packaging containers
16	Glasswares
Department of Floriculture & Landscape Architecture	
1	Lawn mower (manual and electric)
2	Pruning Knife
3	Budding knife
4	Pro-trays
5	Secateurs
6	Budding knife
7	Edging Knife
8	Grass shear
9	Pron G cultivator
10	Annual's Seed Samples and planting material for identification
11	Thermohygrometer

Sl. No.	Name of Equipments
Department of Vegetable Science	
1	pH meter
2	Electronic Balance
3	Hand Refractometer
4	Other glassware, plasticware and breeding materials
Department of Basic and Social Sciences	
1	-20°C deep freezer
2	B.O.D. Incubator
3	Binocular Microscopes
4	Colorimeter
5	Double distillation assembly
6	Electronic balances
7	Hot air oven
8	Hot plate

9	Incubator Shaker
10	Laminar Air Flow Hood
11	Magnetic stirrer with hot plate
12	Microwave Oven
13	Non-refrigerated Centrifuge
14	pH meter
15	Protein electrophoresis assembly
16	Power pack unit
17	Refrigerators
18	U.V. Visible Spectrophotometer
19	Vertical Autoclave
20	Vortex shaker
21	Water bath
22	Thermocycler



Biochemical Analysis Lab

Computer Lab

A Computer Lab having 30 Desktop Computers with printer, projector and 10 KVA UPS has been made operational in the College building to educate and train the students in Computer Applications. Internet connectivity has also been provided for e-communication and access to worldwide knowledge.

Horticulture Education Farm

A Horticulture Education Farm has been sanctioned for the College during the period under report. It's development work is under progress. After completion it will help students



to gain practical experiences regarding various farm practices for horticultural crops. Meanwhile, Vegetable production trials are conducted. A small nursery of various flowers and ornamental plant has developed at open space in college building.

Student Achievements

The students of the college have passed the B.Sc. (Hons.) Horticulture with first division and they have been awarded degrees in the fourth convocation of the university held on 26th September, 2018. Total three students of the college received University Medals during the convocation.

Table 19: University Medalist during Fourth Convocation

Sl. No.	Name of Students	ID. No.	OCPA	Degree Programme	Medals
1.	Kripa Shanker	375	8.585	B.Sc. (Hons) Horticulture 2018	Gold
2.	Deepak Maurya	358	8.427	B.Sc. (Hons) Horticulture 2018	Silver
3.	Naimish Kumar	367	8.420	B.Sc. (Hons) Horticulture 2018	Bronze



Award of Medal and Degree Certificate during 4th Convocation by Hon'ble Governor, Uttar Pradesh

- Two students of the college qualified ICAR JRF Examination for PG studies.
- Passed out students of the college are pursuing their PG degrees from various prestigious Universities/ Institutes, i.e. AMU, Aligarh, Allahabad University, SVBPUAT, Meerut, CSAUA&T, Kanpur, NDUAT, Faizabad, CAU, Imphal, RPCAU, Samastipur, BBAU, Lucknow, Bundelkhand University, Jhansi.
- The college also facilitates its students for entrepreneurship development. Through these efforts, four graduates of the college have established their own enterprises in agro-processing sector.
- Students of the College are motivated to participate in different events organized by the University. Many of students of the College participated in sports and cultural activities organized during 2nd March-7th March, 2019 and won the medals. Students of the college also excelled in academics.

Brief report on RHWE activities

Rural Horticulture Work Experience (RHWE) Programme under Students READY scheme was



Students' Educational Tour

conducted for the students of B.Sc. (Hons.) Horticulture 7th Semester. The programme was conducted as per the guidelines of the Fifth Deans' Committee report of ICAR. Students were attached with four selected KVKs under University jurisdiction, for eight weeks. During this session, students were also attached with horticulture based industries for better exposure with successful business models. An educational tour was also organized as a component of RHWE programme. The students visited IIPR, CISH, CIMAP, IISR, BHU, IIVR, Surabhi Shodh Sansthan etc.

Experiential Learning Programme

During the academic year 2017-18 total 39 students were registered in ELP programme in department of Post harvest Technology under the course Processing and Value Addition of Fruits and Vegetables (PHT 401). The ELP unit of the department is self supporting and working on no profit no loss basis. During the whole programme students prepared 21 products in different groups and earns Rs.6224.94 as profit by selling those products. The profit was distributed among the students by them.



Students' Start Up: Success Story

Mr. Himanshu Dixit, B.Sc. (Hons.) Horticulture

ELP session 2018-2019

Nature of Enterprise: Food Processing Industry

Brand: Vedant

Vedant Ayurved Sansthan, an enterprise of Mr. Himanshu, is situated at Madiyav, Lucknow. It deals with the seasonal fruits like mango, guava, papaya, apple, ginger, aonla, tomato for manufacturing of different processed products like beverages, pickles, laddoo, fruit leather, ketchup, chutney, preserves etc. Local fruits like wood apple and bael are used for the product manufacturing as well. The enterprise is also involved in manufacturing and marketing of wheat daliya, powdered spices, turmeric etc. At present manufactured products are supplied in different areas of Banda, Chitrakoot, Jhansi, Lucknow, Allahabad, Firozabad, Sitapur, Barabanki, Kanpur, Unnav and Banaras. As it's a new brand, it is still on the way of establishing its market over old and popular brands. The most



important benefit of Vedant Ayurved Sansthan products is that they are free of any artificial colour and flavour. Besides, in products like beverages and jams, percentage of fruits is more than that of any other brand.

Mr. Lavlesh Kumar

ELP session 2018-2019

Nature of Enterprise: Food Processing Industry

Brand: SSS Mza



Initially the student learned the techniques for manufacturing and marketing of processed fruit and vegetables during experiential learning programme and started his own enterprise on 08/04/2018. The enterprise is registered with the name of SSS Mza Brand. The enterprise covers Bundelkhand area of Uttar Pradesh. It deals with the seasonal fruits like mango, guava, papaya, apple, ginger, aonla, tomato for manufacturing of different processed products like beverages, pickles, ketchup, chutney, preserves etc. The enterprise has also started the manufacturing and marketing of powdered spices like turmeric powder, dhaniya powder, red chilli powder, mustard oil etc. At present manufactured products are supplied in different areas of Banda, Chitrakoot, Jhansi and Kanpur. Products are displayed and sold at sweet shops, restaurants, canteens etc. As it's a new brand, it is still on the way of establishing its market over old and popular brands. The most important benefit of SSS Mza products is that they are free of any artificial colour and flavour. Besides, in products like beverages and jams, percentage of fruits is more than that of any other brand.

Participation of faculty as resource person

Eight faculty members of the college have participated as resource person in different programmes

viz., workshop, training, conference etc. These programmes were organized by different colleges of the university as well as various other agencies.

Awards

Table 20: List of awardees by various societies/organizations

Sl. No.	Name of Award	Awarding Agency	Name of awardee	Year
1	Bharat Shiksha Ratan	Economic Growth Foundation New Delhi	Dr. Punam Pandey	2018
2	Young Women Scientist award	Agro Environmental Development Society	Dr. Shweta Soni	2018
3	Excellence in Research Award	Innovative Approaches for Rural and Agriculture Advancement (IARAA-2019)	Dr. R. K. Singh	2019
4	Excellence in Agricultural research & Extension Award	Association of Plant Researchers Association, Dehradun	Dr. A.C. Mishra	2019
5	Distinguished Service Award	Society of Biological Sciences and Rural Development, Prayagraj	Dr. A.C. Mishra	2019
6	Fellowship Award	International Society of Noni Science (ISNS)	Dr. R. K. Singh	2019
7	Young Scientist Award	Hi-Tech Horticulture Society, Meerut	Dr. Ajay Kumar Singh	2019
8	Fellowship Award	International Society for Noni Science	Dr. A. K. Srivastava	2019



Awardee Scientists of the College of Horticulture

College of Forestry



The College of Forestry has started to provide impetus to agricultural forestry development in the region and upliftment of rural people in Bundelkhand region. The College of Forestry has 6 departments namely, Silviculture and Agroforestry, Forest Biology and Tree Improvement, Forest Products and Utilization, Wildlife Sciences, Basic and Social Sciences and Natural Resource Management. The College started undergraduate programme B.Sc. (Hons) Forestry from academic session 2017-18 with enrollment of 50 students. The PG programmes in 2 departments *i.e.*, Department of Silviculture and Agroforestry and Department of Forest Biology and Tree Improvement will start from academic session 2019-20. The Faculty

of College comprised of highly qualified academic staff consisting of 2 Associate Professors and 14 Assistant Professors, who have contributed significantly in their specialized field of teaching.

Degree Programmes

The undergraduate degree programme B.Sc. (Hons.) Forestry has been offered since academic session 2017-18.

Table 21: Students enrollment in B.Sc. (Hons.) Forestry Degree Programme

Year	Intake Capacity (University+NRI)	Actual Enrollment
2018-19	61	53

Meetings of Board of Studies

S. No.	Agendas of Meeting	Recommendations
1st Meeting (26th June, 2018)		
1	To adopt the 5 th Dean's Committee Recommendations for the Under Graduate programme of B.Sc. (Hons.) Forestry; All the faculty members are advised to go through the courses and their syllabus and propose the necessary suggestions for their improvements by keeping Uttar Pradesh and Bundelkhand in mind; All faculty members were requested to strengthen the departmental Laboratory, Nursery and Experimental field for effective U.G. & P.G. teaching and research in the college.	The members of the Board approved all the agendas of the First meeting of the Board of studies.
2nd Meeting (19th January, 2019)		
2	Confirmation of proceedings of 1 st Board of Studies held on 27 th June, 2018 at the College of Forestry; Review of the actions taken on the decision of the 1 st Board of Studies held on 27 th June, 2018 at the College of Forestry; Re-structuring Departments as per 5 th Dean's Committee Recommendation; Starting PG programme in Forestry; Moderation in End term question papers; Provision of College Bus; Strengthening of Departmental and common Laboratories; Provision of well equipped Lecture room for UG Teaching; Starting Experiential Learning & Forestry Work Experience Programme; Filling up of vacant teaching positions; Creation of non teaching positions in the college; Enrichment of UG course WL-2202 Ornithology & Herpetology 2+1; Enrichment of NSS course for 1 st Year 1 st semester; Provision of budget for research in the form of in-house project; Strengthening of college library with e-journals.	The members of the Board approved all the agendas of the Second meeting of the Board of studies.

Faculty Positions

Table 22: Department wise strength of faculty members

Sl. No	Department	Professor			Associate Professor			Assistant Professor			Total		
		S*	F*	V*	S*	F*	V*	S*	F*	V*	S*	F*	V*
1	Silviculture and Agroforestry	1	-	1	2	1	1	4	4	-	7	5	2
2	Forest Biology and Tree Improvement	-	-	-	2	-	2	3	3	-	5	3	2
3	Forest Products Utilization	-	-	-	2	-	2	1	1	-	3	1	2
4	Wildlife Sciences	-	-	-	-	-	-	1	1	-	1	1	-
5	Natural Resource Management	-	-	-	2	-	2	3	3	-	5	3	2
6	Basic Sciences	-	-	-	-	-	-	2	2	-	2	2	-
	Total	1	-	1	8	1	7	14	14	-	23	15	8

*S= Sanctioned *F= Filled *V= Vacant

Faculty Development

Total nine faculty members of the college have participated in different capacity development programme organized by various institutions of national repute. The faculties enriched their knowledge through these programmes and now engaged in the development of respective research laboratories and formulation of research programmes. Besides, four faculty members have also participated as resource person in different programmes organized by various agencies.

Research Project

Sl. No.	Title of Research Project	PI	Year of commencement	Total Grant received (Rs.)	Name of Funding Agency
1.	Synthesis of Biopolymer nanocomposites and their application in water purification	Dr. Monika Jain	2018	34,20,120/-	DST, New Delhi

Scientific equipments available with UG laboratories including ELP:

Sl. No.	Name of Department	Items
1	Forest Biology & Tree Improvement	Vacuum cleaner (Bosch) Microscope (ESAW India)
2	Forest Products and utilization	Circular saw (Hitachi) Drilling Machine (Bosch) Cordless Screw driver (Bosch) Jig Saw (Bosch) Sanding Machine (Bosch) Power Chain Saw (Hitachi) Electrical Planer (Bosch) Angular grinder
3	Silvicultural and Agroforestry	Lux Meter (KM-Lux- KUSAM Meco) Tangent height guage Digital caliper Ravi multimeter Dendrometer Spiegel Relaskop Bark gauge Increment borer Compass
4	Wildlife Sciences	Binocular

Laboratories

The College has 7 UG and 14 PG/ Research labs for effective teaching and for basic and applied research in different disciplines.

Students' Educational Tour



Directorate of Research

Banda University of Agriculture and Technology, Banda is committed to work towards improvement of agriculture and allied sectors in the Bundelkhand region. The Directorate of Research is working on the mandate of planning, execution, monitoring, co-ordination, evaluation and impact assessment of research programmes across the faculties to cater the research need of Bundelkhand Region. Directorate is continuously encouraging and supporting the faculty to strength the R & D sector by approaching various funding agencies. To fulfill the mandate, university has

signed Memorandum of Understanding (MoU) with various ICAR institutions (Table 23).

Over the year, faculty approached different International, National and other funding agencies for financial assistance to strengthen research mandates of the university. Presently, one international project (01), twelve AICRP (12) and ten other projects (10) are carrying out different research activities in the university to address the technical and practical problems of agriculture and allied sectors.

Table 23: MoUs between university and other Research Institutions

Sl. No	Name of Institutes
1	Central Institute for Research on Goats, Makhdoom, Farah, Mathura, U.P.
2	NRC on Seed Spices, Tabiji Farm, Ajmer-305206, Rajasthan
3	Indian Institute of Grassland and Fodder Research Institute (IGFRI), Gwalior road, Jhansi, U.P.
4	Indian Institute of Oilseed Research, Rajendranagar, Hyderabad-50030, Talangana
5	Central Institute Subtropical Horticulture, Pehmankhera, PO Kakori, Lucknow-226101
6	Indian Institute of Pulses Research (IIPR), Kanpur
7	Central Citrus Research Institute, Shankar Nagar Nagpur-440010
8	Indian Institute of Maize Research, New Delhi
9	Central Sheep and wool Research Institute, Avikanagar Jaipur Rajasthan-304501
10	Central Agroforestry Research Institute, Gwalior Road, Jhansi – 284003
11	Central Research Institute for Dryland Agriculture, Hyderabad
12	Directorate of Rapeseed- Mustard Research, Bharatpur, Rajasthan
13	Indian Institute of Vegetable Research, Varanasi
14	ICRISAT, Hyderabad
15	MANAGE, Hyderabad

Table 24: Ongoing Research Projects

S.N.	Project Title	Value of the project	Funding Agency
a. Main Centers			
1.	AICRP on Linseed	Rs. 37.96 lakh	ICAR, New Delhi
2.	AICRP on Sesame	Rs. 50.15 lakh	ICAR, New Delhi
b. Voluntary Centers			
1.	AICRP on MAP & Betelvine	Rs. 1.65 lakh	ICAR, New Delhi
2.	AICRP on Pigeon pea	Rs. 0.40 lakh	ICAR, New Delhi
3.	AICRP on MULLaRP	Rs. 2.60 lakh	ICAR, New Delhi
4.	AICRP on Chickpea	Rs. 0.64 lakh	ICAR, New Delhi
5.	AICRP on Rapeseed & Mustard	Rs. 1.34 lakh	ICAR, New Delhi
6.	AICRP on Vegetable Crops	-	ICAR, New Delhi
7.	AICRP on Arid Legumes	Rs. 0.20 lakh	ICAR, New Delhi
8.	AICRP on Honeybee	Rs. 0.40 lakh	ICAR, New Delhi
9.	AICRP on Weed Science	-	ICAR, New Delhi
10.	AICRP on Agro-forestry	-	ICAR, New Delhi

c. Ad-hoc projects Funded from International Agencies			
1.	Improved crop management with strengthened seed supply system for drought prone rainfed low land in South Asia.	US \$ 4000.00	IRRI, Philippines
2.	Demonstration of Improved technologies in Oilseeds & Pulses	Rs. 3.13 lakh	ICRISAT, Hyderabad
d. Projects funded from National Agencies			
1.	MIDH Seed Spices	Rs. 21.70 lakh	DASD, Govt. of India
2.	Implementing genomic approaches for breeding high yielding genotypes with enhanced resistance to yellow mosaic in Mungbean	Rs. 6.90 lakh	SERB, DST, New Delhi
3.	Centre of Excellence in Dryland Agriculture	Rs. 5.60 crore	Govt. of U.P., Lucknow
4.	Synthesis of biopolymer nano-composites and their application in water purification.	Rs. 34.12 lakh	SERB, DST, New Delhi
e. Projects funded from Private Sectors			
1.	Evaluation of plant Growth regulator Mepiquat Chloride 5% AS in Pumpkin	Rs. 6.00 lakh	Gharda Chemicals Pvt. Ltd.
2.	Evaluation of Chlorpyrifos + Cypermethrin against fruit borer in chilli crop.	Rs. 5.00 lakh	Gharda Chemicals Pvt. Ltd.
3.	Evaluation of Ploy 4 as a source of multi-nutrients and optimization of doses on chickpea in Bundelkhand region of India.	\$ 35562.00	Sirius Pvt Ltd.
4.	Testing agronomic efficacy of concentrated liquid solution of Sulphur on growth and yield of mustard.	Rs. 3.24 lakh	Yara Fertilizers Pvt. Ltd.

Brief about the research projects

Main Centres

A. All India Coordinated Research Project (AICRP) – Linseed

Four trials of linseed namely IVT (R), IVT (I), AVT(R) and AVT (I) with 18,19,4 and 4 entries, respectively were conducted. Entries LMS-16-R-16, LMS-2016-R-7 in IVT (R), LMS-2016-I-5, LMS-2016-I-2 in IVT and LMS-2016-I-14 for Utera (I) were under evaluation at crop research farm, Mauranipur. Entries LMS-215-27 and LMS-2015-31 are in Advance Varietal Trial under irrigated situation. Seventeen entries in PVT (I) and PVT (R) under evaluation for inclusion in IVT for next season. Advance Line: 40 Advance Lines are grown for last year PVT. Out of 1300 Germplasm lines, 650 lines were sown & maintained.

Eight fresh crosses were made during the season, 6 lines in F1, 13 in F3, 7 in F3 were sown and harvested and 855 SPS were sown from F4 to F6 generations. Nucleus Seed of varieties Padmini, Parvati, Sharda, Azad Alsi-1 and Azad Alsi-2 is sown.

B. All India Coordinated Research Project (AICRP) – Sesame

IVT: 24 Entries including local check MT-75 were evaluated. Entry Nos. IVT-2018-4 (652 kg/ha), IVT-2018-11 (612 kg/ha), IVT-2018-5 (631 kg/ha), IVT-2018-10 (627kg/ha), IVT-2018-15(621 kg/ha), IVT-2018-6(611 kg/ha) and IVT-2018-14 (611 kg/ha) were found superior to local check MT-75 (601 kg/ha). MT-2015-6 and MT-2015-4 were included in trial. AVT: 10 Entries including local check MT-75 were evaluated. Entry Nos. AVT-2018-6 (668 kg/ha), AVT-2018-2 (642 kg/ha) and AVT-2018-1 (531 kg/ha) gave superior yield to local check with 513 kg/ha seed yield. 272 germplasm lines were maintained. Seventeen promising lines were evaluated against three checks MT-2017-11 gave highest seed yield of 673 kg/ha followed by MT-2017-7 with 642 kg/ha seed yield. These entries will be proposed for their evaluation in IVT Kharif 2019. 42 Advance Lines were maintained to their evaluation and 18 lines are selected to their evaluation in PVT Kharif 2019. 10 Crosses, under National crossing program were harvested. 27 Crosses in F1, 20 in F2 were bulk harvested and 1097

SPS were made from F3 to F6 generation. 5 MT-2015-6 and MT-2015-1 were new Entries for Kharif 2018 and 4 retained entries were evaluated at 9 locations in State trials. 6.7 kg nucleus seed of variety Pragati (MT-75) was harvested and 150 Single Plant were selected for next year nucleus seed production.

Voluntary Centers

AICRP MAP & Betelvine

Out of 20 promising lines of sweet basil (*Ocimum basilicum* L.), only 13 lines germinated (OS3, 4, 6, 7, 8, 9 and 15 did not germinate). The study revealed that, higher plant height (OS 16, 91.00 cm), plant spread (OS12, 83.33 cm), No. of primary branches/plant (OS11, 9.33) and leaf numbers/plant (OS16, 1055.66) were recorded whereas, days to flowering (94.33 days) under OS, green leaf yield (kg/ha) (OS14, 2024.67), dry leaf yield (OS16, 1062.01 kg/ha) and seed yields (OS12, 425.67 kg/ha). The study revealed that, higher plant height (108.00 cm), plant spread (94.33 cm), no. of primary branches/plant (13) and leaf numbers/plant (2104.33) were recorded under OB19 line whereas, days to flowering (57.67 days) under OB13, green leaf yield (kg/ha) (2835.07), dry leaf yield (886.17 kg/ha) and seed yields (1479.87 kg/ha) under OB16 were reported. 20 promising lines were evaluated. The study revealed that, highest plant height was recorded for AB11 (97.33 cm), highest plant spread for AB2 and AB9 (76.67 cm), maximum no. of primary branches/plant was observed for AB11 (9.67) and maximum no. of Leaf number/plant was recorded for AB17 (1159.33) whereas, minimum days to flowering was recorded for AB19 and AB16 (99 days), highest green leaf yield (2692kg/ha) was observed for AB 17, highest dry leaf yield was recorded in AB11 (1150.33 kg/ha) and seed yield (536 kg/ha) was recorded for AB16.

AICRP (Pigeonpea)

The experiment constituted with 13 test entries and executed as per technical programme at university research farm. The trial GM was 2029 kg/ha. The experiment constituted with 12 test entries and executed as per technical programme at university research farm. The trial GM was 1941 kg/ha.



Hon'ble Vice Chancellor visiting
AICRP-Pigeonpea trials

AICRP (MULLaRP)

The experiment constituted with 20 test entries and executed as per technical programme at university research farm. The trial GM was 1714.03 kg/ha. The experiment constituted with 19 test entries and executed as per technical programme at university research farm. The trial GM was 2011.14 kg/ha. The experiment constituted with 22 test entries and executed as per technical programme at university research farm. The trial GM was 1702.32 kg/ha. The experiment constituted with 16 test entries and executed as per technical programme at university research farm. The trial was conducted



Field view of
AICRP-MuLLARP trials

as per technical programme but trial was failed at this location due to soil conditions. The germination was very poor in all entries. The experiment was conducted with 25 test entries (coded) of urdbean under IVT as per technical programme.

AICRP (Chickpea)

In AVT 1 (Desi) trial, least mean percent damage (5.00) and mean larval population per 5 plants (1.5) were recorded on E-17. Entries E-2, E-5 and E-18 were found resistant and the range of mean larval population was from 2.00 to 2.5 and percent pod damage was 5.00 to 7.00. Maximum percent pod damage (15.67) was recorded on E-31, E-33, E-40 and E-45 were found resistant in which the minimum mean larval population 1.5 larvae /5 plants and minimum percent pod damage 5 % were rerecorded in IVT (Desi). E-27, E-30, E-37, E-41, E-44, E-48 and E-50 were also found resistant where percent pod damage varied from 5.50 to 6.50. In IVT (last sown), the minimum percent pod damage (5%) was recorded on E-70 and E-78 and the entries i.e. E-74, E-85, E-87 and E-89 were also found resistant in which percent pod damage varied from 6.33 to 6.50. Resistant entries i.e., E-112, E-121, E-106 of IVT (Rainfed) were recorded at BUAT, Banda in which percent pod damage varied 6 to 7 % and mean larval population/ 5 plants was 2.5. It was observed in IVT (Kabuli + ELS Kabuli), the larvae of *Helicoverpa armigera* were unable to fed complete grains/ pod and some pods were only scraped. E-134, E-135 and E-135 were found resistant. In AVT 1 (MH), E-145 was recorded resistant with minimum mean larval population 2.5/5 plants and percent pod damage 6.17. Entries E-163, E-165 E- 161 of IVT (MH) were found resistant with percent pod damage 10.00 to 10.50 and 3.5 to 6.5 mean larval population per 5 plants. Entries E-178, E-185, and E-180 of ENT 02 showed resistance and 2.5 to 4 larvae per 5 plants and percent pod damage varied from 7.33 to 8.00.

Experiment constituted with 32 test entries and executed as per technical programme at university research farm. The trial GM was 1536.63 kg/ha. The experiment constituted with 45 test entries and executed as per technical programme at university research farm. The trial was conducted as per technical programme (sown 26-10-2018) but trial was failed at this location

due to soil conditions. Initially, all entries in three replications were germinated with good plant population but after 30 days plants turned yellow and get dead.

AICRP (Rapeseed & Mustard)

During 2018- 19, total 145 IVT entries of *Brassica* were evaluated for resistance against mustard aphid. Out of these entries, less than 25 mustard aphids per plant (10 cm top twig) were recorded at flowering and pod stage on the 6 entries of *Brassica* (SBG-18-07, SBG-18-25, SBG-18-27, SBG-18-118, SBG-18-119 and SBG-18-135). Hence, these 6 entries of *Brassica* were showed tolerance against mustard aphid. However, 25-50 mustard aphids per plant (10 cm top twig) were recorded at flowering and podding stage on 7 entries of *Brassica* (SBG-18-06, SBG-18-16, SBG-18-17, SBG-18-96, SBG-18-108, SBG-18-117 and SBG-18-137). These 7 entries of *Brassica* were observed as mild tolerant varieties against mustard aphid.

Total 46 AVT entries of *Brassica* were evaluated for resistance against mustard aphid resistance. Out of these entries, less than 25 mustard aphids per plant (10 cm top twig) were recorded at flowering and podding stage on the 3 entries of *Brassica* (SAG-18-04, SAG-18-05 and SAG-18-06). These 3 entries of *Brassica* were observed as tolerance against mustard aphid. However, 25-50 mustard aphids per plant (10 cm top twig) were recorded at flowering and podding stage on the 2 entries of *Brassica* (SAG-18-43 and SAG-18-45). These 2 entries of *Brassica* were showed mild tolerance against mustard aphid.



Field view of
AICRP-Rapeseed Mustard trials

Mustard aphid was recorded on the both varieties (PM- 31 and RH- 725). The highest yield (1826.98 kg/ ha) was recorded under treatment (Dimethoate @ 0.03%) which was 29.13% higher than untreated field in variety PM- 31. However, the highest yield (1802.38 kg/ ha) was recorded under treatment (Dimethoate @ 0.03%) which was 22.93% higher than untreated field in variety RH- 725.

Mustard aphid was recorded in the all the four *Brassica* crops under both timely and late sowing conditions. The aphid population incidence was commenced at 7th standard week and cession at 12th standard week. Average population of mustard aphid was recorded 13.6 and 22.0 per plant on *Brassica juncea*; timely shown and late sown, respectively. Average population of mustard aphid was recorded 11.5 and 16.3 per plant on *Eruca sativa*; timely and late sown respectively. Average population of mustard aphid was recorded 15.4 and 53.6 per plant on *Brassica napus*; timely and late sown, respectively. Average population of mustard aphid was recorded 8.7 and 85.5 per plant on *Brassica rapa*; timely and late sown, respectively. The population incidence of other insect pests *viz.* mustard sawfly, painted bug and flea beetle, cabbage caterpillar was not observed on *Brassica* crops.

The experiment constituted with 27 test entries and executed as per technical programme at university research farm. 1000 seed weight and % oil estimation is underway to record. Oil estimation will be done at DRMR, Bharatpur.

First appearance of *Alternaria* blight and powdery mildew was recorded on 02-02-2019 and 11-02-2019, respectively in AVT-1 and AVT-II strains. Out of 35 strains, four AVT-1 and AVT-II strains namely SBL-18-4 12, 13, 28, 29 and 31 were found highly resistant to *Alternaria* blight. 11 entries were found resistant, 11 genotypes were found moderately resistant and 10 genotypes was found susceptible to *Alternaria* blight. SBL-18-12,13,28 and 31 were found highly resistant to powdery mildew. 18 and 13 AVT-I and II strains were found moderately resistant and susceptible, respectively, against powdery mildew.

Sixty entries of uniform disease nursery (UDN) trials were evaluated against major diseases of rapeseed-

mustard. First appearance of *Alternaria* blight and powdery mildew was recorded on 29-1-2019 and 13-2-2019 respectively. Out of the 60 genotypes, three genotypes namely UDN- 18-44, 48 and 50 were found highly resistant against powdery mildew and *Alternaria* blight. Powdery mildew was found most dominant disease on rapeseed-mustard followed by *Alternaria* blight. 50 and 5 entries were found resistant and moderately resistant to *Alternaria* blight, respectively. Two entries were found susceptible to *Alternaria* blight. 22 UDN entries were found moderately resistant whereas, 35 entries were found susceptible to powdery mildew. Other diseases were not observed in any entries.

AICRP (Vegetable Crops)

Two selected lines of sponge gourd (BUAT SG18-1 and BUAT SG18-2) and one of mustard greens (*Brassica juncea* L.) (BUAT MG-1), has developed from selection IC 0612094. Plants tolerant to moisture stress and spreading type. Leaves 5 lobed, flattened, male and female flowers start from 5-6 and 8-9 nodes, respectively. Fruits light green, slender, 25-30 cm long, 120-125g in weight, 30-35 fruits per plant and fruit yield 230-250 q/ha under proper crop management. Fruits give pleasing aroma and taste on cooking. This line is suitable for cultivation in both summer and rainy season. Plants tolerant to moisture stress profusely branched and spreading type. Leaves dark green deeply lobed, thick, flattened and comparatively small. Fruits dark green, glaucous, 15-20 cm in length, 80-90 g weight at edible maturity, remain tender for longer time, fruit yield capacity of 180-200 q/ha.



Field view of trials under onion and garlic

AICRP (Arid Legumes)

Ten IVT entries along with four checks were evaluated on the basis of mean test entry CP-5 gave highest mean yield of 1139 Kg/ha and entry CP-1 gave 1004 Kg/ha.

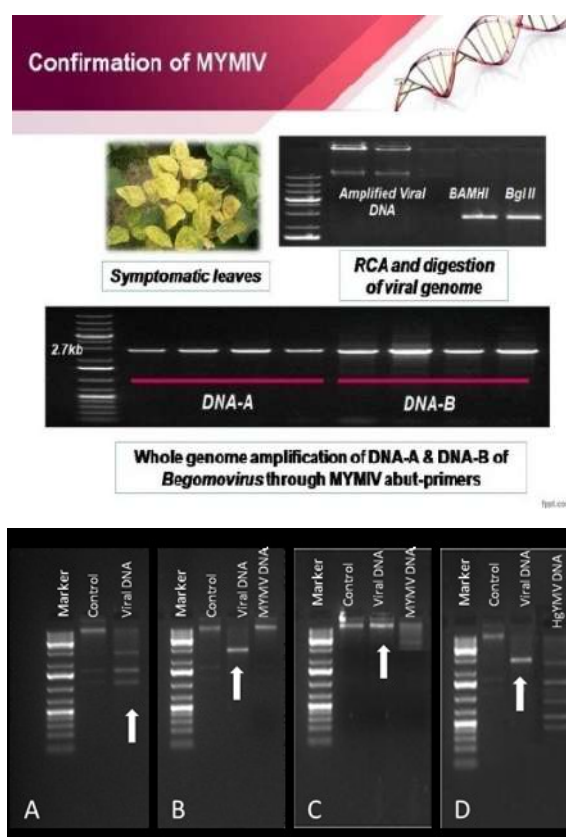
AICRP (Honeybees and Pollinators)

Seven major insect species as foragers/ pollinators were recorded from the flowers of mustard crop. Out of these, 4 fauna were identified at species level and 2 fauna were identified at genus level and 1 fauna at order level. Out of Hymenoptera, 4 species belong to family Apidae, and Dipteran visitor which belongs to Syrphidae family. Out of the insect visitors, 4 species *Apis dorsata*, *A. mellifera*, *A. cerana*, and *A. florea* and *Syrphus* spp. were collected both nectar and pollen. The Shannon-Wiener Diversity Index of insect foragers/ pollinator of mustard in BUAT, Banda was recorded $H' = 1.66$. The highest diurnal abundance in a day was recorded of *A. mellifera*, followed by *A. cerana*, *A. dorsata* and *A. florea*. The Varroa mite and wax moth has been the most serious enemy of honey bee (*A. mellifera*) in Banda. Both enemies were observed more serious on weak colony during floral dearth under inimical weather condition. AICRP (Honey Bees & Pollinators) has delineated training on scientific beekeeping and distributed 90 honey bee colonies and basic tools viz, Hive tools, Gloves, Bee veil, Knife, Smoker, etc. to the Tribals in Tikariya, Gopipur and Karauhan in Manikpur, Chitrakoot district.

Implementing genomic approaches for breeding high yielding genotypes with enhanced resistance to yellow mosaic in Mungbean

Total of 117 donors including cultivated species, breeding lines and wild accession belonging to 19 different species were identified as potential donors for MYMIV resistance. Two mapping populations viz SML-836 x TCR-20 and SML-836 x TCR-7 has been developed. Beside this, 310 microsatellite markers were screened in which 94 were found polymorphic. Our results showed a significant association of 17 microsatellite markers with MYMIV among them, CEDG211, BM212 and CEDG166 were found within the earlier reported QTL region whereas two markers viz., CEDG293 and cp1038 were found outside the

region and are considered as novel identified regions. Currently, the polymorphism survey is underway. For validation of identified QTLs and detecting more QTLs for MYMIV on bi-parental population is in progress. Now these mapping populations were sown at research farm of BUAT, Banda in spring 2019 to advance the generation and to achieve the rest objectives.



Projects funded from Private Sectors

Evaluation of plant Growth regulator Mepiquat Chloride 5% AS in Pumpkin

The treatment T7 i.e., foliar spray of Mepiquat Chloride @ 1000 ppm twice, first 15 days earlier and second at initiation of flowering resulted in highest fruit yield (29.15 t/ha) followed by T6 i.e., spray of Mepiquat Chloride @ 2500 ppm 15 days after flower initiation (25.45 t/ha). These treatments were also promising for high number of fruits per plant (5.20 and 4.67, respectively) and lower male/female sex ratio (3.88 and 3.61, respectively). However, doses and stage of spray of this PGR did not show significant effect on average fruit weight, leaf area at 15 and 30 days after spray and number of leaves per plant at 30 days after spray. On the

basis of above observations, foliar spray of Mepiquat Chloride @ 1000 ppm twice, first 15 days earlier and second at initiation of flowering is recommended in pumpkin during kharif season.



Hon'ble Vice Chancellor monitoring field trials

Evaluation of Chlorpyrifos + Cypermethrin against fruit borer in chilli crop

The chilli var. 'Kashi Anmol' was sown on 07.07.2018 for raising the nursery and the seedlings were transplanted on 22.08.2018 with a spacing of 60 x 45 cm in plots of 5 x 5 sq. m. The trial was laid out with seven treatments *i.e.*, T1: Chlorpyrifos 50% + Cypermethrin 5% EC@ 375+37.5 g a.i./ha, T2: Chlorpyrifos 50% + Cypermethrin 5% EC@ 500+50 g a.i./ha, T3: Chlorpyrifos 50% + Cypermethrin 5% EC @ 625+62.5 g a.i./ha, T4: Chlorpyrifos 50% EC @ 600 g a.i./ha, T5: Cypermethrin 10% EC @ 60 g a.i./ha, T6: Indoxacarb 14.5% + Acetamiprid 7.7% SC @ 111 g a.i./ha and T7: Untreated Control with three replications under randomized block design. Foliar sprays of different treatments with Knapsack sprayer fitted with hollow cone nozzle @ 500 l/ha spray volume when thrips population reached at ETL @ 3 nymphs/leaf. Two sprays were scheduled on 15.09.2018 & 19.10.2018. The population of thrips were recorded on 10 randomly selected plants per treatment & per replication. Observations were recorded on 15 leaves (top 5, middle 5 and bottom 5) per 10 randomly selected plants in each replication of treatments. Pre-treatment populations of thrips were recorded one day before the spray of insecticide. Post-treatment observations were recorded at 3, 5 & 10 days after each spray. Major picking has been completed but few left over produce is to be harvested for residue estimation. The green and red

chilli samples along with soil samples after final harvest have been sent to the authorized laboratory for residue estimation. Phytotoxicity at T1 (625+62.5 g a.i./ha) & T2 (1250+125 g a.i./ha) and untreated control (T3) dose was recorded and there were no phytotoxicity observed in any treatment. The effect of different treatments on natural enemies has also been observed. Scanty population of natural enemies was observed in the field. Larvae and adults *Cheilomenes sexmaculata*, adults of *Chrysoperla carnea* were observed. In addition, few spiders were also observed. Thrips population and yield data will be subjected to statistical analysis to find out the least significant difference.



Center of Excellence in Dryland Agriculture (CEDA)

The establishment of Center of Excellence in Dryland Agriculture (CEDA) with focus on Pulses and Oilseed Crops at BUAT, Banda has been approved by the UP Council of Agricultural Research (UPCAR), Govt. of UP with sanctioned amount of Rs. 500.60 lakhs for five years *w.e.f.* 27th August, 2018.



Hon'ble Vice Chancellor monitoring the fields developed under different blocks of CEDA

for the development of experimental farms for various disciplines under CEDA. The foundation stone for establishment and development of CEDA Experimental farms at the selected site was laid by Mr. Ranvendra Pratap Singh, Hon'ble State Minister of U.P. with independent charge on 03.03.2019. The selected experimental area of 40.0 hectare is situated at two different locations in the University campus as under:

Experimental farm	Area allocated and disciplines to which allocation has been made
CEDA I	25 hectares (Fruit science for Orchard I, Plant Breeding and Agro-forestry)
CEDA II (in front of Administration building)	15 hectares (Fruit Science orchard II, IFS model, Beekeeping unit, Agronomy and Vegetable Science)

The different blocks for each specific activity have been demarcated, it is expected that land will be ready for the experimentation in upcoming *kharif* season.

The following experiments were laid down under CEDA:

- **Breeding for development of high yielding genotypes of field pea with improved drought tolerance**

About 77 germplasm lines of field pea were collected from Indian Institute of Pulse Research, Kanpur, CSA University of Agriculture and Technology, Kanpur and Gorakhpur. The germplasm lines were planted in augmented design. Lines were evaluated for yield and yield contributing traits. Data analysis is under progress.

Breeding for development of high yielding lentil genotypes with improved drought tolerance.

About 55 germplasm lines of lentil were collected from CSA University of Agriculture and Technology, Kanpur and adjoining area of Banda. The germplasm lines were planted in augmented design. Lines were evaluated for yield and yield contributing traits. Data analysis is under progress.

- **Development of high yielding drought tolerant chickpea (*Cicer arietinum* L.) genotypes to improve yield under changing agroclimatic conditions.**

Fixed homozygous lines (Three ICVT trials from

ICRISAT). Released varieties recommended for WCZ western central zone (14 released variety evaluated). Ninety chickpea germplasm lines collected and screened for drought tolerance in augmented design. Data recording and analysis in rabi 2018-19 crop season is going on.

Development of high yielding drought tolerant Moongbean and Urd bean genotypes.

About 150 mungbean and 30 urdbean genotypes have been procured from different institutes, which will be maintained, multiply and evaluated for drought tolerance and other yield traits in coming season. One locally adopted wild/weedy relative of mungbean has been collected from the fellow lands of Banda and maintained in pot condition and seeds have been harvested. Ten accessions of wild *Vigna* species have been procured from ICAR-Indian Institute of Pulses Research, Kanpur; which will be evaluated for various important biotic and abiotic stresses and will be further utilized in pre-breeding and breeding programmes of mungbean and urdbean.

- **To study the performance of different vegetable crops genotypes in Bundelkhand region of U.P.**

Survey and collection of land races/genotypes/local varieties/lines of vegetables from various National and International institutes as well as from local areas has been conducted. The vegetable such as onion (10 genotypes), garlic (11 genotypes) okra (25 genotypes) have been collected. The experiment on onion and garlic have been conducted at BUAT in *Rabi* 2018-19, both the crop harvested and data under compilation. In coming *Kharif* season also okra and onion will be evaluated for recommendation in this area.

A total of 10 entries of garlic *i.e.* Yamuna Safed-2, Yamuna Safed-3, Yamuna Safed-4, BUATG-1, BUATG-2, BUATG-3, BUATG-4, BUATG-5, BUATG-6, BUATG-7, along with three checks Yamuna Safed-2, Yamuna Safed-3 and Yamuna Safed-4 were sown in Randomized Block Design with three replications on experimental form of Banda University of Agriculture and Technology, Banda on 22/10/2018. The maximum bulb diameter (4.52 cm) was recorded in genotype BUATG-2 followed by BUATG-5 (4.40 cm) and Yamuna

Safed-3 (4.22 cm). The all genotypes were harvested and minimum (149 days) were taken by check Yamuna Safed-3 followed by genotype BUATG-2 (151 days) and BUATG-5 (154 days). The highest marketable yield 128.75 q/ha was recorded in entry BUATG-2 followed by BUATG-5 (118.75 q/ha) and check variety Yamuna Safed-3 (112.50 q/ha).

- **Biotic stress management**

Three districts *viz.*, Banda, Mahoba and Jhansi were surveyed to find out the current status of major diseases of pulses and oilseeds. The occurrence of collar rot, dry root rot and wilt was noticed in chickpea and lentil. However, mustard was affected by powdery mildew and *Alternaria* blight. Diseased samples were collected from surveyed area. In laboratory, *Sclerotium rolfsii* causing collar rot of chick pea and lentil has been isolated and purified from diseased samples.

- **Natural Resource Management**

The soil sample from the Germplasm Evaluation site have been collected and processed samples were analysed for the determination of parameters *viz.* pH, EC, organic carbon and exchangeable potassium by adopting standard procedures. The result of analysis is presented in table 25.

Table 25: Analysed data of soil samples

Sl. No.	Parameters	Analyzed results
1	pH	8.50
2	Electrical Conductivity	1.138dS/m
3	Organic carbon	0.34 %
4	Exchangeable potassium	268.8 kg/ha

The analysis data revealed that soil pH is slightly alkaline in nature, electrical conductivity is high and organic carbon content is very low and potassium is in medium category.

In addition, approximately 20 ha area has been planned to develop under micro irrigation. Out of which 10 ha area under fruit crops, 3 ha under forestry, 2 ha under vegetables and 5 ha under agronomical crops will be covered. Different *in situ* water harvesting models will be made for drought hardy fruit crops especially for ber, bael and aonla.



Land Development for the experimental area under CEDA

Directorate of Extension

The Directorate of Extension came into existence during 2015 as the Nodal Agency, responsible for promotion of Agriculture and allied sectors generally in Uttar Pradesh and particularly in Bundelkhand region of U.P. through professional extension services including training, farm advisory, on farm testing, demonstrations and information services. The Directorate provides guidelines, monitor and evaluate the extension programmes of KVKs under jurisdiction of BUAT and various extension hubs located at the University headquarter.

Krishi Vigyan Kendra

Krishi Vigyan Kendras (KVKs) are important nodal centers for the overall development of farming community through training, demonstration, OFTs, CFLDs and transfer of technologies programmes in agriculture and allied sectors. University comprises of six KVKs of Bundelkhand region namely Banda, Mahoba, Lalitpur, Hamirpur, Jalaun and Jhansi and one NGO KVK, Ganiva are working under the jurisdiction of Banda University of Agriculture and Technology, Banda. These KVKs were transferred to BUAT, Banda from CSAUA&T Kanpur, on 1st April, 2017.

Major activities of Directorate of Extension

- Zonal workshop on CFLD and Seed hub was organized at BUAT, Banda during 9-10th October, 2018.
- Training of trainers under ASCI programme was organized during 15-17th October, 2018.
- Two days pre mid-term review workshop of KVKs was organized at Directorate of Extension, BUAT during 14-15 November, 2018.
- Three days' faculty development programme was conducted in two batches during 19.01.2018 to 24.01.2018. Total 78 faculties have participated in the programme.
- Training programmes were also conducted on revolving fund and soil testing for the scientists of KVKs.
- Directorate has also conducted 10 frontline demonstrations on pea chick covering 10-acre land and conducted 50 frontline demonstrations of mustard covered the area of 50 acres in 10 villages of Banda district.
- Directorate participated in Agri. Exhibition (*Krishi Kumbh*) held at IISR Lucknow and DRI Chitrakoot during 26-28 October, 2018 and 25-27 February, 2019; respectively.
- Initiation of development of 'Organic Corridor'. Bundelkhand region of UP is popularly called as pulse bowl of UP. These crops are low input requiring. Considering this it is presumed that this zone is organic in nature by default. Therefore, it has been decided to harness the weakness of the area as an opportunity and proposed an area of organic corridor comprising of all seven districts of Bundelkhand. The discussion to frame the road map for this enthusiastic project was held on February 2nd, 2019 at KVK, Hamirpur on under the chairmanship of Hon'ble Vice Chancellor, BUA&T, Banda along with prominent stakeholders of all districts.
- Successfully conducted 'Diploma Programme in Agricultural Extension Services for Input Dealers (DAESI)' funded by National Institute of Agriculture Extension Management (MANAGE) to equip the input dealers with sufficient knowledge to transform them into para-extension professionals so as to enable them to address the day-to-day problems being faced by the farmers at field level. The Diploma programme (DAESI) was inaugurated on 16 Dec., 2017 in the presence of Honorable Vice Chancellor, BUAT and District agriculture authorities. Each Sunday was decided to conduct the training programme. The formal schedule of training was started on 24.12.2017. Total 40 dealers were registered from the district covering all the blocks. The training schedule was comprised of 80 lectures and field visits. Out of 40 registered dealers total 38 participants were appeared in examination out of them 5 were passed with distinction.
- Two farmers' training programme sponsored by the Directorate of Arecanut & Spices Development,

MoA& FW, Govt. of India, Calicut, Kerala were conducted at KVK, Hamirpur and KVK, Lalitpur on 16th March, 2019 and 27th March, 2019, respectively. The farmers were encouraged to grow different type of spices crops as per the location for fetching remunerative prices. Total number of farmers participated at KVK, Hamirpur and Lalitpur was 90 and 104, respectively.

Technical Achievements

Training Programmes

KVKs organized 368 training courses with the participation of 9823 farmers, farm women, rural youths and extension functionaries. The farmers and farm women represented a proportion of 77.73% and 21.79% respectively. Total 8061 farmers and farm women and 459 rural youths were provided skill training in different enterprises. Similarly, 548 extension personnel and 755 sponsored participants were also trained in different areas.

Table 26: Achievements of training programmes

Clientele	No. of Courses	Total participants
Farmers & Farm Women	302	8061
Rural youths	24	459
Extension functionaries	23	548
Sponsored Training	19	755
Total	368	9823



Training programme on embroidery making for Rural Youths at KVK

Cluster Frontline Demonstrations

CFLD on Pulses and Oil seeds

Technology demonstrations on pulses were organized on an area of 236 ha involving 516 farmers and on oilseeds on an area of 197 ha involving 483 farmers. The crop wise and thematic area wise information is exhibited in tables.

Table 27: Thematic area wise achievements of CFLD on Pulses

Crops	Thematic Area	No. of Farmers	Area (ha)
Pigeonpea	Varietal Evaluation	25	10
	Micronutrient Deficiency	25	10
Blackgram	Varietal Evaluation	25	10
	ICM	65	30
Green Gram	Varietal Evaluation	25	10
	IPM	7	7
Chickpea	Varietal Evaluation	90	35
	IPM	15	9
	Weed management	5	12
	ICM	28	20
Fieldpea	Varietal Evaluation	28	11
	ICM	105	42
Lentil	Varietal Evaluation	25	10
	ICM	48	20
Total		516	236

Table 28: Thematic area wise achievements of CFLD on Oilseeds

Crops	Thematic Area	No. of Farmers	Area (ha)
Groundnut	Varietal Evaluation	50	20
	IPM	25	10
Sesamum	Varietal Evaluation	191	76
	IPM	30	13
Mustard	Varietal Evaluation	75	30
	IPM	30	13
	ICM	67	30
Linseed	Varietal Evaluation	20	8
	ICM	25	10
Total		483	197



Front Line Demonstrations

A total of seven demonstrations in 60.4 ha on cereals and millets were laid out. In vegetable crops total 11 demonstrations in 10.65 ha were laid out in all three crop seasons. Two demonstrations on fodder production technology were also laid out with twenty farmers and resulted 21.43% higher yield than farmers practice. In the livestock sectors 8 demonstrations were conducted in cattle, buffalo and poultry benefiting 88 farmers besides one demonstration on mushroom production and farm machinery was also conducted. FLD on kitchen gardening was also conducted at farmers' fields with 180 beneficiaries.

Technology Assessment

Krishi Vigyan Kendras conducted trials on farmers' fields with active participation of farmers for assessment and refinements of technologies for site specific need to improve its adoption. Total 44 technologies of 11 thematic areas were laid out at 1245 farmers' fields. These trials were on integrated nutrient management (02), integrated pest management (08),

integrated disease management (05), integrated crop management (02), weed management (02), varietal evaluation (14), resource conservation technologies (02), drudgery reduction (04), nutritional garden (03), integrated farming system (1) and small scale income generation (1).

Besides, 10 technologies were assessed under livestock management with active participation of 66 beneficiaries. The technologies related to different thematic areas were on disease management (01), feed and fodder management (05), nutritional management (02) and production management (02).

Extension Programmes

Various extension programmes Kisan Gosthies (115), Kisan Melas (6), exhibition (15), films shows on farm technologies (12), Radio talks (45), TV talks (10), Extension literature (85), diagnostic visits (306) diagnostic visits and mobile advisory services were organized by KVKs during the period under report.

Table 29: Extension Programmes organized by KVKs

Activities	No. of programmes	No. of farmers	No. of Extension Personnel	Total
Advisory Services	141	3837	254	4159
Diagnostic visits	306	1631	97	1847
Field Day	44	1635	67	1732
Group discussions	227	3424	134	3742
KisanGosthi	115	9360	226	9629
Film Show	12	3165	98	3265
Self -help groups	23	610	24	643
KisanMela	6	2575	40	2620
Exhibition	15	8491	121	8616
Scientists' visit to farmers field	698	4325	107	4851
Plant/animal health camps	15	352	19	371
Farm Science Club	1	28	0	29
Ex-trainees Sammelan	5	227	0	232
Farmers' seminar/workshop	7	483	74	560
Method Demonstrations	12	200	4	204
Celebration of important days	27	4189	235	4440
Special day celebration	15	1477	72	1554
Exposure visits	15	501	45	496
Total	1684	46510	1617	48990



Hon'ble Vice Chancellor and Director Extension visiting a stall at Farmers' Fair

Table 30: Other Extension Programmes

Particulars	Number
Electronic Media (CD./DVD)	2
Extension Literature	60
Newspaper coverage	364
Popular articles	25
Radio Talks	45
TV Talks	10
Animal health camps (Number of animals treated)	8 (368)
Others	9
Total	523



Animal Health Camp

Resource Generation through Production of Inputs at Farm

Seed production programme has taken up by all KVKs to make the quality seeds available locally. KVKs produced 4402.4 q seed including cereals (226.0 q), oilseeds (19 q), pulses (4157.4 q) during 2018-19. KVKs also produced 157700 planting materials of worth Rs. 59370/ including vegetables (148180), fruit saplings (3820) and ornamentals (5700). A total of 3750 kg of bio-products and 16450 kg of bio-fertilizer

were produced at KVK's farm. Bio-fertilizers included vermicompost (2950 kg) and NADEP compost (13500 kg). Thus, a total 16450 kg bio-fertilizers were produced of Rs. 59000/ value. All KVKs have established their cattle units and produced 7988.10 l milk of worth Rs. 2.55 lakh.

HRD and publications

Total 31 workshops were attended by the KVK officials in different scientific areas and 49 research papers, 2 bulletins, 11 technical reports including APR, proceedings, project reports and quarterly news letters were published. Total 58 extension folders, 3 books and 11 book chapters were also published by different KVKs.

On-Going Projects

A. NICRA (National Innovations on Climate Resilient Agriculture) – KVK, Jhansi

Main objective of project is to enhance resilience of Indian agriculture to climate change and climate vulnerability through strategic research and technology demonstration.

Recommendations

- KVK applied pertinent technologies in the villages under NICRA, namely NADEP & Vermi-Compost, budding on wild germplasm of *ber*, deep summer ploughing and soil testing and obtained good results. These technologies are adopted by the farmers in the area of demonstration as well as in neighboring villages to mitigate the adverse climatic conditions.
- A number of cultivars of cereals, pulses, oilseeds, vegetables were demonstrated which suited well in the area and adopted by farmers due to their high yield potential under adverse climatic conditions. Among the demonstrated cultivars of different crops *viz.*, Groundnut (TG-37A), Sesame (Shekhar) Urd (Shekhar-2), Mustard (Pitambri), Chickpea (JG-14), Wheat (Raj-4120), Vegetable (Broccoli) performed better. Seed treatment through *Trichoderma* and *Rhizobium* cultures also performed well in adverse climatic conditions like drought and heat stress.

- KVK also demonstrated fodder crops' cultivars e.g., Sorghum (M.P Chari), Barseem (Bundel Barseem -2) and obtained good yield. The demonstration on vaccination to animals before rainy season reduced the rate of mortality among livestock. The application of mineral mixture increased the milk yield and improved animal health.

KVK Jhansi is also working with other research institutes for promotion of farmers' friendly technologies. MoU was signed with NCIPM, New Delhi for two projects viz., Development and Validation of IPM strategies for selected pulse crops in different agro-ecological regions – Chickpea and Tribal sub-plan projects on validation and promotion of Integrated Pest Management in wheat, pulses and vegetable crops in tribal region of Jhansi.

NICRA (National Innovations on Climate Resilient Agriculture) – KVK, Hamirpur

The main objective of the project is to demonstrate drought/heat tolerant technologies in different modules at adopted village (a) Polythene mulching in horticultural crops viz., fruit and vegetables significantly reduced the frequency of irrigation and weed intensity, (b) Sprinkler irrigation system was enhanced water use efficiency in pulse crop and promoted the crop vigor, (c) Drip irrigation system in fruit orchard minimized the wastage of irrigation water significantly and (d) Leveling and bunding of undulated land increased the area under crop cultivation.

Recommendations

- The demonstrations on improved varieties of *kharif* and *rabi* crops such as mung (HUM-12, IPM-02-03 & Virat), urd (Shekhar-2), Sesame (Pragati), pigeonpea (IPA-203), chickpea (JG-42 & RVG-202), fieldpea (Aman), lentil (IPL-316) and mustard (RH-406) enhanced the productivity of the respective crops. The performance of these varieties was highly appreciated by the farmers. The demonstration on kitchen garden gave better response and harvesting of crops with improved sickle reduced the drudgery and increased the work efficiency of farm labourers.
- Addition of mineral mixture in livestock feed increased its milking capacity up to greater extent.

Removal of ecto and endoparasites from livestock improved their health. Timely vaccinations of infectious disease in livestock significantly reduced the risk and minimized the mortality.

Besides, seed bank of mung (Virat), chickpea (JG-14 & RVG-202) and fieldpea (Aman) was established. Fodder bank of maize (African tall), jowar (MP chari), barseem (Vardan) and oat (JHO-822) was also established at farm.

Major Activities

UPCATET 2018

Since the inception of the BUAT, the university had organized first time Uttar Pradesh Combined Agriculture and Technology Entrance Test (UPCATET) 2018 during 16th-18th May, 2018. UPCATET is organized every year by one of the State Agricultural Universities on rotation basis for admission in UG, PG and Ph.D. programmes of four agricultural universities (CSAUAT, NDUAT, SVBPUAT and BUAT) of the state. The examination was conducted at 41 centres across six major cities viz., Varanasi, Lucknow, Meerut, Ayodhya, Kanpur and Banda. There were 20354 candidates enrolled for this examination. Candidates were eligible for admission in 12 UG programmes, 7 PG programmes and 5 Ph.D. programmes after qualifying this exam. This year admission process for different programmes was carried out through online counselling process. The qualified candidates who had registered for online counselling would be able to fill the choice of university and degree programme in order of their preference. The seats were allotted based on merit-cum-choice-cum-reservation basis. This online mode of counselling was done for the first time in UPCATET, which was being organized from 2006 by other agricultural universities on rotation basis.

Peer Review Team Visit

A Peer Review Team (PRT) under the chairmanship of Dr. Bangali Babu, Former National Director, NAIP (ICAR) visited the University campus during 29th June, 2018 for verification of Self Study Report as submitted by the University to the ICAR for the accreditation. Dr. S.L. Goswami, Vice chancellor of the University presented Self Study Reports of College of Agriculture and College of Horticulture to the team and briefed about past and present status of the university. The members of PRT visited both the colleges of the university, library, Students' Education Farm and other facilities in the campus. The members of PRT also interacted with students and faculty members of the colleges. The Colleges of Agriculture and Horticulture were approved for accreditation for a period of five years during XXII meeting of the National Agricultural

Education Accreditation Board held on 28th September, 2018 at NASC Complex, New Delhi.



PRT members visiting laboratory

Fourth Convocation

The fourth Convocation of the University was organized on 26th September 2018, where Hon'ble Governor of Uttar Pradesh Shri Ram Naik conferred degrees to 83 graduates of B.Sc.(Hons.) Agriculture and B.Sc.(Hons.) Horticulture degree programmes of Batch 2014. Speaking on this occasion the Hon'ble Governor highlighted the progress made by the country in the field of advancements in agriculture and asked the students to utilize their knowledge to develop Bundelkhand region. Hon'ble Governor motivated the students by saying to adopt '*chareveti chareveti*' principle in their lifestyle. Prof. S.N. Puri, Ex-Vice Chancellor, MPKV, Rahuri and CAU, Imphal was the Chief Guest and delivered the Convocation Address. He highlighted the initiatives taken by the Govt. to impart quality agriculture education and asked to the students and teachers to make the university among one of the pioneers.



Hon'ble Vice Chancellor presenting memento to Hon'ble Governor, U.P. during convocation

Dr. S.L. Goswami, Vice Chancellor of the University presented the report on progress made by the University in the field of agricultural education, research and extension. Mr. Harsh Chaurasia of B.Sc. (Hons.) Agriculture programme and Mr. Kripa Shankar of B.Sc. (Hons.) Horticulture bagged Vice Chancellor's Gold Medal and two students received Vice Chancellor's Silver Medal and two students received Vice Chancellor's Bronze medal.

Joining of New Vice Chancellor



Hon'ble Vice Chancellor greeting Hon'ble Governor, U.P.

Dr. U.S. Gautam, Former Director, ICAR-ATARI, Kanpur joined BUAT on October 25th, 2018 as 3rd Vice Chancellor of the university after term completion of Prof. S.L. Goswami. Hon'ble Vice Chancellor had also served as Director, ICAR-ATARI (formerly ZPD Zone-VII), Jabalpur from June 30th, 2006 to March 3rd, 2012. He was recipient of several national and international awards. He has been awarded with Fakruddin Ali Ahmad Award for outstanding research in tribal farming systems during 2010 by ICAR, New Delhi. Recently, he has been elected as the President of Indian Society of Extension Education, IARI, New Delhi.

Milestones at the International Level

Dr. Aishwarya Maheshwari, Assistant Professor, Wildlife Sciences was invited at the World Life Science Conference, Beijing China (27 to 29 October, 2018) and Conservation Geopolitics Forum, University of Oxford,



UK (18 to 22 March, 2019). Dr. Maheshwari represented Banda University of Agriculture and Technology, Banda in wildlife research and conservation field. He showcased two case studies on snow leopards from the Indian Himalayan region and global dataset on the species. During his China visit, he was also awarded the Travel Award by the Ministry of Science and Technology, People's Republic of China.

Production Technology of High Value Pulse Crops in Bundelkhand Region

A targeted training programme on '*Dalhan adharit krishi pranali me kaushal vardhan*' especially for rural women was held during 28th-30th November, 2018. Total 66 rural women registered with different SHGs as *Krishi Sakhi* were participated in this residential programme sponsored by National Rural Livelihood Mission (NRLM), Banda. Sri. K. Karunakar Pandey, Deputy Commissioner, NRLM, Banda, UP attended the inaugural session as special guest. Dr. Bhanu Prakash Mishra (Associate Professor & Head, Department of Agril. Extension) was the Course Director. The programme was organized with the objective of promoting cultivation of high value pulse crops in Bundelkhand region. The distinguished faculty members from various department of the University (including Department of Agronomy, Plant Pathology, Entomology, Soil Science, Agricultural Extension, Genetics and Plant Breeding, Post-Harvest Technology) discussed the major scientific practices with the participants. Special yoga sessions were also conducted during training period. On successful completion of the training, participants were awarded with certificates. Packets of mushroom spawn, pickle and vermicompost were also distributed to the participants.



Participants of Training Programme on Production Technology of High Value Pulse Crops

MIDH- Regional level workshop on 'Harnessing the potential of spices production in Bundelkhand region of Uttar Pradesh: Issues and Strategies'

The MIDH-Regional level workshop on 'Harnessing the potential of spices production in Bundelkhand region of U.P.: Issues and Strategies' was held at Banda University of Agriculture and Technology, Banda, U.P. during 18th December -19th December, 2018. To develop strategies for Production & Propagation Technologies of Spices in Bundelkhand region, Uttar Pradesh for doubling farm income was the major objective of this workshop. The workshop was sponsored by Directorate of Arecanut and Spices Development, Calicut, Kerala under Mission of Integrated Development of Horticulture (MIDH). Mr. Madhu Nair, Research Officer, DASD, MoA& FW, Calicut, Kerala was special invitee. Eminent invited speakers from RLBCAU, DASD, Spices Board, Lucknow, NABARD, CIMAP and BUAT discussed various aspects of spices cultivation in Bundelkhand region. Total 58 participants actively participated in two days' workshop including Subject Matter Specialists from Krishi Vigyan Kendras (Sonbhadra, Mirzapur, Fatehpur, Banda, Mahoba, Hamirpur, Jhansi, Lalitpur and Jalaun), officials from State Agriculture Department, State Horticulture Department, progressive farmers from all seven districts of Bundelkhand region of UP and faculty members of BUAT shared their experiences

and views. Dr. A.K. Singh, Chief General Manager, NABARD, Lucknow was present as Guest of Honour in the valedictory function.



Hon'ble Vice Chancellor felicitating Dr. A.K. Singh, Chief General Manager, NABARD, Lucknow

Collaborative Meeting with 2030WRG

Bundelkhand region has been facing alarming situation in context to water scarcity. In order to cope up this challenge, a meeting was organized on December 29th, 2018 in collaboration with 2030WRG (Water Resource Group) for establishment of Centre of Excellence on Integrated Sustainable Water Management in Bundelkhand region. 2030WRG is a unique Public-Private-Civil society partnership that supports



Meeting with 2030CWG under chairmanship of Hon'ble Vice Chancellor

governments to accelerate sustainable water resources management for long term development and economic growth. As mandated by the Govt of UP in November, 2017, 2030 WRG has to set up a Multi-Stakeholder Platform (MSP) to ensure cohesive collective action for Bundelkhand. During the meeting, The detailed project proposal was presented by the delegates of WRG.

Skill development programmes

Two Skill Development Programmes (Gardener and Vermicompost Producer) were organized during 1st -30th January, 2019. Both of the programmes were recognized by ASCI, New Delhi. Programmes were sponsored by DASD, Calicut, Kerala. There were 28 and 26 trainees registered for skill development programmes for 'Gardener' and 'Vermicompost Producer', respectively. Among 54 participants from different regions of Bundelkhand of U.P., 8 were from general, 37 from OBC and nine are from SC categories.

Mr. Krishna Singh Tomar, Assistant Professor (CoH) was the master trainer of gardener training programme. The prime focus of the gardner training programme was to orient the skills of landscaping under the supervision of master trainer and after acquisition of skills the learners can earn through gardening as a venture. The strict and critical evaluation of trainees was carried out in the presence of evaluator Mr. Virendra Singh Chandrawat from Trendsetters. Out of 28 registered trainees in Gardener training, 25 trainees passed successfully the examination and obtained the certificates. A training kit comprised of bag, T- shirts, caps, pruning shear, hedge shear, mowers, grafting

knife, secateurs and grass trimmers was also provided to each participant.



Participants of Skill Development Programme for Vermicompost Producer

Dr. Arvind Kumar Gupta, Assistant Professor (CoF) and Dr. Deo Kumar, Assistant Professor (CoA) were the two master trainers of vermicompost producer programme. Exposure visits to KVK, Banda and Chitrakoot and a unit developed by a progressive farmer, Shri Vigyan Shukla at Attara were also arranged for the practical exposure to the trainees. The major achievement of this training was the establishment of eight vermicompost units by trainees at their respective farm during the course of training programme. The evaluation was carried out by Mr. Himanshu Mishra from Organic India. Certificates and training kits comprised of bag, T- shirts, caps, waste decomposer and 2 kg vermi-culture were distributed to each participant after successfully completion of training programme.

4th Agrivision 2019: Integrated Agriculture-Prosperous Bharat

Two days mega national convention entitled “4th Agrivision 2019” on Integrated Agriculture - Prosperous Bharat was organized by Vidyarthi Kalyan Nyas, Bhopal in association with Ministry of Agriculture and Farmers’ Welfare and Indian Council of Agricultural Research (ICAR) at NASC complex, Pusa, New Delhi on 28-29 January, 2019. Shri Radha Mohan Singh Hon’ble Agriculture Minister, Government of India was chief guest of the inauguration session along with Dr. A.K. Singh, DDG (Extension) ICAR; Dr. N. S. Rathore, DDG (Education) ICAR; Dr. U. S. Gautam, VC BUAT Banda; Prof. M. Premjit Singh, VC CAU, Imphal



Hon’ble Vice Chancellor, Students and faculty members of the university participating in Agrivision 2019

(Manipur); Dr K.P. Singh, VC HAU, Hisar (Haryana) and other dignitaries of ICAR. Sixty-three agriculture universities and private agriculture colleges were participated in this event. The different technical session was organised on the different aspect of the agriculture education and improvement of farmers’ livelihood. This event provided good platform to the students where they can share their views directly with policy makers and scientific community. Eight post graduate students of BUAT, Banda were participated in this mega convention and presented poster on “Natural Resource Conservation and Management for Improvement in Agriculture of Bundelkhand Region”. Hon’ble Vice Chancellor, BUAT, chaired one technical session, where he shared his valuable insights. Major highlights of his speech were the conservation of natural resources particularly water and soil, integrated farming system model for

betterment of farming community and decreasing trend of organic carbon particularly in Uttar Pradesh, which is one of the major hindrances in wide spread adoption organic farming.

ICAR-JRF Preparation Cell

Under the chairmanship of Hon,ble Vice Chancellor, ICAR- JRF Preparation cell has been constituted in the Colleges of Agriculture and Horticulture to facilitate students for preparation of examination. The cell is active since January, 2019 under the Co-ordinatorship of Dr. Amit Kumar Singh, Assistant Professor (Agronomy) in CoA and Dr. A K Srivastava (Head, Department of Fruit Science) in CoH and Co-Coordinator Dr. Vijay Sharma, Assistant Professor (Genetics & Plant Breeding) in CoA and Dr. Om Prakash, Assistant Professor (Fruit Science) in CoH. Cell contains subject wise core instructors from different disciplines. A total of 45 students joined ICAR-JRF Cell this year. Classes are being organized as per JRF syllabus. Mock tests are being organized at every 15 days for assessment of students. Cell has been provided with separate library facility, discipline wise competitive books, reference books, journals, magazines, etc.



Winter School on “Appropriate Agricultural Technologies and Extension Approaches for Doubling Farmers’ Income”

The MANAGE sponsored winter school on “Appropriate Agricultural Technologies and Extension Approaches for Doubling Farmers’ Income” started on 5th February and completed on 25th February, 2019. Dr. R. Saravanan (Director, Agricultural Extension, MANAGE, Hyderabad) interacted with all the participants, faculties and students. This winter school

was held to seek upon all the possible ways for doubling the farmers' income through ICT and other important tools. Various strategic issues for betterment of farming community were discussed. There were 25 trainees in winter school, majority (19) of them were from KVKs and six were Assistant Professors from BUAT, Banda and other institutions. Among 25 participants, one fellow was from Arunachal Pradesh. Total 56 lectures were delivered by 42 invited speakers from various ICAR institutes viz., IARI, IIPR, IGFRI, CSSRI, CAFRI, IIFSR, IISR, CISH, ATARI, DKMA and other universities viz., GBPUAT, Pantnagar; IGKV, Raipur; BHU, Varanasi; RLBCAU, Jhansi; MGCVV, Chitrakoot; BUAT, Banda and from CSIR-CIMAP, Lucknow. In addition, Dr. R. Saravanan, Dr. S. Rajan (Director, CISH, Lucknow), Dr. V.V. Sadamate (Agriculture Extension Expert and Former Advisor, Planning commission), Dr. B. Gangwar (Former Director, IIFSR, Meerut and Director, IAS, Bundelkhand University, Jhansi), Dr. B. Jirli (BHU), Dr. S.K. Singh (DKMA, New Delhi) and other eminent personalities contributed their opinion in during the programme.



Inaugural function of CeRA Workshop

Joshi (CeRA Incharge and Business Manager, DKMA) introduced vision, objectives, functions and other dimensions of CeRA. Mrs. Mitali Roy Ghosh (Social media expert) stated all the basic ideas about professional social media accounts. Mrs. Aruna T. Kumar (English Language Editor, DKMA) delivered lecture on effective writing of research paper/article for journals and popular magazines (English) and Mrs. Ashok Singh (Hindi Language Editor, DKMA) delivered lecture on effective writing of research paper/article for journals and popular magazines (Hindi). All the faculty members and PG students had participated in this workshop.



Dr. R. Saravanan, Director, Agricultural Extension, MANAGE, Hyderabad addressing in Winter School

CeRA Workshop

One day CeRA (Consortium for e-Resources in Agriculture) workshop was organized at Banda University of Agriculture and Technology, Banda by University Library in collaboration with Directorate of Knowledge Management in Agriculture (DKMA), ICAR, New Delhi on 26th February, 2019. Mr. S.K.

Extra-curricular Activities

University Foundation Week - 2019



Inauguration of Foundation Week by Shri Ranvendra Pratap Singh, Hon'ble Minister of Agriculture (State), Govt. of U.P.

University Foundation Week was organized during 2nd -7th March, 2019. During this week long programme various sports (athletic, indoor and other games), cultural (light vocal song, folk song, folk dance, skit etc.), literary (debate, quiz, elocution, extempore and Hindi poetry recitation) and fine arts (poster making, cartoon making, on the spot painting and Rangoli) competitions were conducted. Shri Ranvendra Pratap Singh, Hon'ble Minister of State for Agriculture Education and Research, Govt. of Uttar Pradesh graced the occasion as chief guest and inaugurated the event on 3rd March, 2019. Dr. U. S. Gautam, Hon'ble VC BUAT, Banda presided the inaugural function. Many dignitaries including Shri Shyam Bihari Gupta, Founder & Director, *Kamdhenu Samvardhan evam Anushandhan*

Kendra, Jhansi delivered a lecture on cow rearing and earning the income through various cow products. Shri Bharon Prasad Mishra, Hon'ble MP (Lok Sabha), Banda, Chitrakoot and Shri Lavlesh Singh addressed the students on 5th March, 2019. Dr. Milkha Singh Aulakh, Ex-Vice Chancellor, BUAT, Banda addressed the students and staff on 6th March, 2019. The closing ceremony of the programme was graced by Dr C. Prasad, Ex-DDG (Agri. Extension), ICAR on 7th March, 2019 and the medals and certificates were distributed to all the winners.



Winners of various competitions organized during Foundation Week

Sports Activities

- i. University Sports Board has constituted to chalk out the sports (indoor and outdoor) competitions round the year and to facilitate the students as and when required.
- ii. First time university sports team; consisting of 23 students' athlete along with two faculties as team manager and team coach, respectively; participated in 19th All India Inter Agricultural



Opening Ceremony of Foundation Week

Universities Sports and Games Meet (Agri-UniSports) held at Punjab Agricultural University, Ludhiana during 2-5 January, 2019.

- iii. A committed coaching / training is being conducted under the supervision of Dr. Abhishek Yadav, Assistant Professor (Physical Education) to explore the talented students in particular sports event and to groom the interested students of university for further participation at Zonal and National level.



Felicitation of Dr. C. Prasad, Former DDG, Agril. Extension (ICAR) by Hon'ble Vice Chancellor

- iv. Infrastructural facilities of various sports e.g., volleyball, kabaddi, badminton, table tennis, etc. have created and sports kits were also procured to conduct various games.

Cultural and Literary activities

- i. University Cultural Club has been constituted to provide the better opportunities for students and to seek the talent for the competitions pertaining to cultural (theatre, music and song), literary (debate, quiz, extempore and elocution) and fine arts activities in befitting manner.
- ii. First time university team consisting of 21 students, two team managers and two accompanists have participated in the 19th All India Inter Agricultural Universities Youth Festival (Agri-Unifest) held at Sardar Krushinagar Dantiwada Agricultural University, Gujarat during 3-7 February, 2019.
- iii. Hindi Chetna Mass was organized by the Literary and Fine Arts Club of College of Horticulture during 14th September to 13th October, 2018. During this one month programme various literary competitions like Debate and Quiz were organized among the students.

In addition, an awareness and orientation programme was organized on 16th August, 2018 in connection with the Post Matric Scholarship of students and Fee refunding of students. Mass cleanliness drive was organized in all the Hostels on 18th November, 2018.

Celebration of Important Days and Awareness Programme

Table 31: Important events and awareness programme celebrated

Sl. No.	Important Events	Date
1.	Birth Anniversary of Shri Chandra Shekhar, Ex-Prime Minister, Govt. of India	17 th April, 2018
2.	Parashuram Jayanti	18 th April, 2019
3.	29 th National Safety Week (An awareness programme on traffic rules was delivered by DM, SP and RTO among the faculty, staff and students.)	28 th April, 2018
4.	Maharana Pratap Jayanti	9 th May, 2018
5.	Pledge taking ceremony on the occasion of Anti –Terrorism Day	21 st May, 2018
6.	International Day of Yoga	21 st June, 2018
7.	Parthenium Awareness Week (In this programme students, faculty and staff took a pledge for eradication of Parthenium weed from the BUAT campus.)	16 th - 22 nd August, 2018
8.	National Sports Day on the occasion of birth anniversary of hockey wizard Major Dhyan Chand	29 th August, 2018
9.	Fresher's day function to welcome the new comer students of the university	7 th September, 2018
10.	Gandhi Jayanti	2 nd October, 2018
11.	Birth anniversary of Sardar Vallabh Bhai Patel and Acharya Narendra Deo	31 st October, 2018
12.	National Farmers Day on the occasion of birth anniversary of Chaudhary Charan Singh Ex-Prime Minister, Govt. of India	23 rd December, 2018
13.	Awareness cum training programme on EVM and VVPAT for faculty, staff and students in association with the officials of District Election Office, Banda.	22 nd December, 2018

14.	National Youth Day on the occasion of birth anniversary of Swami Vivekananda	12 th January, 2019
15.	Birth anniversary of Shri Karpuri Thakur	24 th January, 2019
16.	National Voter's Day (Dr. U S Gautam, Hon'ble Vice Chancellor BUAT Banda administered the voter's pledge to all the faculty, staff and students)	25 th January, 2019
17.	70 th Republic Day (On this occasion Dr. U. S. Gautam, Hon'ble Vice Chancellor, BUAT Banda addressed the gathering and exhorted to work hard for scaling up the name and fame of the university).	26 th January, 2019
18.	Sant Ravidas Jayanti	19 th February, 2019



Celebration of Republic Day

Students participated proactively to clean their room and hostel premises. Stickers have been distributed to all the faculty, staff and students in connection with Armed Forces Flag Day for raising the fund and the collected fund was deposited to the District Soldiers' Welfare and Rehabilitation Officer, Banda.

Wildlife Week Celebration

The Wildlife Week is celebrated all over the country in the 1st week of October every year with the view to create awareness and conserve wildlife in India. The Department of Wildlife Sciences, College of Forestry organized Wildlife Week-2018 on the same



fashion to sensitize the students and teachers towards wildlife conservation through presentations, films and group discussion. Besides, conducted painting and quiz



Felicitation of progressive farmers on the occasion of Kisan Samman Divas

competition and nature trail walk for bird and wildlife observations in BUAT campus during entire week celebration.

National Service Scheme (NSS)

National Service Scheme was started in the University from 2015 to develop the young graduate student's personality through social and community development work. N.S.S. is a mandatory non-credit course in undergraduate programme. Students are motivated through this scheme, towards creating awareness about various social evils in the rural and urban community related to education, health, disaster management, environmental, voter awareness and agriculture and also enable them to be decisive jointly at their own level. Two units of N.S.S are functioning and 200 NSS volunteers completed their two years N.S.S programme.

National Cadet Corps (NCC)

NCC unit of Senior Division with fifty cadets' capacity was started in the University from 2015 to provide an opportunity to the young graduate students to join Armed Forces for the service of Nation. The NCC unit of the College comes under 60 UP NCC Batalian, Fatehpur. A total of 10 students have been enrolled as NCC Cadet. Students are being regularly participated

in drill parade etc. Besides, the cadets of NCC were involved in the welcome ceremony during visits of Hon'ble Governor, Ministers, etc. The cadets also performed during Independence Day and Republic Day.

English Club

The English Club is formed by Department of Basic and Social Sciences in the College of Horticulture on July 7, 2018. The coordinator of this club is Dr. A.C. Mishra (Head, Basic Sciences and Social Sciences, CoH) and co-coordinator is Dr. Punam Pandey (Assistant Professor, English, CoH). Since its inception, English Club is marching towards its objectives of imparting knowledge of English language and brushing up students on professional skills. Though, English club is set up in College of Horticulture but it is serving all the three colleges of this university and 12 students of CoA, 55 students of CoH and 53 students of CoF are enrolled in this club. Classes/Activities are running in the English Club in pattern of the pre-tailored. The activities viz., remedial classes, reading of newspapers/books, application writing and cv writing along with classes are conducted. The introduction of Elementary English Course to UG students of all colleges will be implemented from the next academic session, 2019-20. This course will be of great help to students facing language problem in writing, speaking and comprehension.



Students Exposure

Seven Post Graduate Students have participated at national convention titled "4th Agrivision 2019" on Integrated Agriculture- Prosperous Bharat, organised by Vidyarthi Kalyan Nayas, Bhopal in association

with Ministry of Agriculture and Indian Council of Agriculture Research (ICAR) at NASC complex, Pusa, New Delhi during 28th-29th January, 2019. In another programme, five students from BUAT, Banda participated in National Youth Parliament Festival-2019 organized at Jagadguru Rambhadracharya Handicapped University, Chitrakoot on 25th January, 2019. Besides, UG & PG students also visited different stalls organized under start up programme at Banda.



Faculty and Students of BUAT visiting stall

Anti-Ragging

Anti-Ragging Squads were constituted for strict vigil and raid in the hostels to curb the menace of ragging. Not a single incidence of ragging was reported from the students of any hostel, therefore academic session 2018-19 was also declared ragging free similar to previous academic sessions.

Students' Amenities Developed

- Considering the economic condition of the university students, accidental life insurance policies have been implemented to all the bonafide students and their parents/guardians through The Oriental Insurance Company Limited Thane, West Mumbai.
- To control the mosquitoes from the campus, mass fogging drives were conducted surrounding the hostels with the cooperation of Banda Municipality, Banda.
- Railway concession facilities for the students have created to avail the railway ticket concession during educational tour, All India competitions and

home town visit during semester break.

- iv. Convenience Centre of the university has been started in the month of January, 2019 to facilitate the students and staff in which bank facility of Punjab National Bank, ATM facility, departmental store, canteen, hair salon, laundry, cyber café, etc. were arranged.
- v. Drinking RO water facility for the girls' students has been arranged in hostel.
- vi. The nomenclature of all the hostels of university has been done in the name of seasons viz., boys' hostel (Varsha, Sharad, Hemant, Basant and Shishir).
- vii. A Health Checkup Camp for the students, faculty and staff was organized on 6th January, 2019 in which Dr. S. K. Singh, Kulvanti Hospital, Kanpur and Medical Advisor, Medanta Hospital, Gurgaon and his team was invited to check up the health status of students and staff members. Staff and students were prescribed and distributed the medicines.



- viii. Badminton court has been created in each and every hostel for proper utilization of leisure time of students in the hostels.
- ix. Sharad, Hemant, Basant and Shishir hostels were connected with main RO water supply line. Previously, the drinking RO water was available at a point only.
- x. JRF cell has been established to provide better coaching and proper guidance through conducting extra classes. Books pertaining to competition were procured for better availability among the students.
- xi. Internet facility also arranged for students to browse the web information / literature in library.



University Cultural Team participating in 19th AgriUNIFEST 2019 held at SDAU, Dantiwada, Gujarat

University Publications

Research Papers/Review Papers/Policy Papers

1. Pal, M., Kumar, V., Singh, R.S., Singh, A.S., Panwar, G.S., Kushwaha, S. and Mahto, D.K. 2018. Effect of Date of Planting and Planting Geometry on Growth and Yield of Mentha (*Mentha arvensis* L.) *Int. J. Curr. Microbiol. App. Sci.*, 7(Sp): 4471-4475.
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3. Ojha, P.K., Singh, A.K., Singh, A.K. and Mishra, B.P. (eds.). 2019. Organic farming for Sustainable Agriculture and Horticulture Biotech Books, New Delhi, India. ISBN: 978-81-7622-451-2
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12. Poonam. 2019. Industrial Agroforestry. Agroforestry: A Sustainable Landuse System (Ed.), Mar Max Publisher, New Delhi.
13. Mishra, S and Kalia, A. 2019. Marketing of Agricultural Inputs in India. Marketing of Agricultural Commodities in India, Write and Print Publication, New Delhi: 301-313.

Book Chapters

1. Kumar, S., Mishra, B.P., Verma, K.S., Kumar, N. and Handa, A.K. 2018. Biomass Production and Carbon Sequestration Potential under different LandUse Systems of Western Himalaya, Scientific Publishers, New Delhi. 145-152. ISBN: 978-93-8730-706-3
2. Kumar, A. and Mishra, D. 2019. An Analysis of National Food Security Bill-2013. Agricultural Diversification for Food and Nutritional Security, Biotech Books, New Delhi, India.
3. Mishra, A., Singh, M. and Srivastava, A.K. 2019. Importance of Beneficial Microorganisms in Organic Farming. Organic Farming for Sustainable Agriculture and Horticulture (Ed.), Biotech Books, New Delhi: 389-398. ISBN: 978-81-7622-451-2
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2. Pandey, R., Gupta, B.K., Mishra, B.P. and Singh, N. 2018. *Dalhan Adharit Krishi Pranali me Kaushal Vardhan*, published by Directorate of Extension, BUAT, Banda.

ANNEXURE-I**Administration**

S. No.	Name	Designation
1.	Dr. U.S. Gautam	Vice Chancellor
2.	Dr. G.S. Panwar	Registrar
3.	Dr. Mukul Kumar	Comptroller
4.	Dr. N.K. Bajpai	Director Extension
5.	Dr. B.K. Singh	Director (Administration & Monitoring)
6.	Dr. V.K. Singh	Associate Dean Students' Welfare
7.	Dr. G.S. Panwar	Dean, College of Agriculture
8.	Dr. S.V. Dwivedi	Dean, College of Horticulture
9.	Dr. Sanjev Kumar	Associate Dean, College of Forestry
10.	Dr. Kamaluddin	Associate Librarian
11.	Dr. Mukul Kumar	Principal Investigator, CEDA
12.	Dr. A.K. Chauhan	Senior Scientist cum Head, KVK Lalitpur
13.	Dr. Mukesh Chand	Senior Scientist cum Head, KVK Mahoba
14.	Dr. Mohammad Mustafa	Senior Scientist cum Head, KVK Hamirpur
15.	Dr. Rajeev Kumar Singh	Senior Scientist cum Head, KVK Jalaun
16.	Dr. Nishi Roy	Senior Scientist cum Head, KVK Jhansi
17.	Dr. Shyam Singh	Senior Scientist cum Head, KVK Banda

ANNEXURE-II

Distinguished Visitors of the University

Sl. No.	Name	Designation	Date of visit
1.	His Excellency Shri Ram Naik ji	Hon'ble Governor, Uttar Pradesh	26.09.2018
2.	Dr. S.N. Puri	Former Vice Chancellor, CAU, Imphal	26.09.2018
3.	Shri Ranvendra Pratap Singh	Hon'ble State Minister Agriculture, Agriculture education & Research, Uttar Pradesh	03.03.2019
4.	Shri Surya Pratap Shahi ji	Hon'ble State Agriculture Minister, Uttar Pradesh	31.01.2019
5.	Dr. V.V. Sadamate	Former Advisor (Agriculture), Planning Commission of India Govt. of India, New Delhi	12.02-2019-13.02.2019
6.	Dr. S. Rajan	Director, ICAR-CISH, Lucknow	07.02.2019
7.	Dr. R. Sarvanan	Director (Agricultural Extension), MANAGE, Hyderabad	05.02.2019
8.	Dr. A.R. Sharma	Director Research, RLBCAU, Jhansi	12.02.2019
9.	Dr. S.K. Singh	Director, ICAR-DKMA, New Delhi	15.02.2019
10.	Dr. B. Gangwar	Former Director, IIFSR, Modipuram, Meerut	18.02.2019
11.	Shri Bhairo Prasad Mishra	Hon'ble M.P., Banda	05.03.2019
12.	Shri Shyam Bihari Gupta	Founder & Director, Kamdhenu Samvardhan & Research Center, Jhansi	04.03.2019
13.	Prof. Milkha singh Aulakh	Founder and Ex- Vice Chancellor, BUAT, Banda	06.03.2019
14.	Dr. Chandrika Prasad	Ex ADG (Extension), ICAR, New Delhi	07.03.2019

ANNEXURE-III

Faculties of College of Agriculture participated in Capacity Development Programmes

S. No.	Name & Designation	Nature of programme	Date	Venue	Name of the Programme
1	Dr. M.K. Mishra Assistant Professor	Conference	April 28-29, 2018	New Delhi	International Conference on Agriculture, Allied and Applied Sciences (ICAAAS-2018)
2	Dr. Hitesh Kumar Assistant Professor	Annual Group Meet	April 28-30, 2018	Sardarkrushinagar Dantiwada Agricultural University, Gujrat	Annual Group Meet of AICRP on MULLaRP and Arid Legumes Scientists
3	Dr. Pankaj Kumar Ojha Assistant Professor	Training	June 03, 2018	BUAT, Banda	Aquifer Management through Participatory Approach and Local Groundwater Issues
4	Dr. Dheeraj Mishra Assistant Professor	Training	June 03, 2018	BUAT, Banda	Aquifer Management through Participatory Approach and Local Groundwater Issues
5	Dr. B.K. Gupta Assistant Professor	Training	June 03, 2018	BUAT, Banda	Aquifer Management through Participatory Approach and Local Groundwater Issues
6	Dr. B.P. Mishra	Training	June 03, 2018	BUAT, Banda	Aquifer Management through Participatory Approach and Local Groundwater Issues
7	Dr. Rahul Kumar Rai Assistant Professor	Tier III Training	June 03, 2018	BUAT, Banda	Aquifer Management through Participatory Approach and Local Ground Water Issues
8	Dr. Hitesh Kumar Assistant Professor	Brain Storming Session	July 16, 2018	UPCAR, Lucknow, U.P.	Present scenario and future roadmap for improvement in oilseeds production of U.P. in the context of doubling of farmer's income
9	Dr Dinesh Sah Associate Professor	Training program	July 16-18, 2018	NIPHM Hyderabad	Advances in Integrated Weed Management'
10	Dr. Dheeraj Mishra Assistant Professor	Refresher Programme	July 16-21, 2018	IRM, Jaipur	Digital Innovation in Agriculture Extension Management
11	Dr. Amit Kumar Singh	25 th Annual Group Meeting of AICRP Rapeseed-Mustard	Aug. 3-5, 2018	BHU Varanasi	ICAR-DRMR, Bharatpur & IAS, BHU, Varanasi

12	Dr. Mayank Dubey Assistant Professor	Conference	August 11-12, 2018	Ranchi, Jharkhand	2 nd National Conference on Doubling Farmers Income for sustainable and Harmonious Agriculture
13	Dr. Hitesh Kumar Assistant Professor	Annual Group Meet	August 27-29, 2018	Rajasthan Agriculture Institute, Durgapura, Jaipur Rajasthan	Annual Group Meet of AICRP Chickpea
14	Dr. Kamaluddin Assistant Professor	International Conference	October 20-22, 2018	Swami VivekanandSubharti University, Meerut, Uttar Pradesh, India	Advances in Agricultural, Biological and Applied Sciences for Sustainable Future
15	Dr. Kamaluddin Associate Professor	International Conference	October 20-22, 2018	(ABAS-2018)', Swami VivekanandSubharti University, Meerut, UP	Advances in Agricultural, Biological and Applied Sciences for Sustainable Future
16	Dr. Pankaj Kumar Ojha Assistant Professor	International Conference	Oct 30 - Nov 1, 2018	BIT, Patna	International Conference on Rural Livelihood Improvement for Enhancing Farmers' Income through Sustainable, Innovative Agri and Allied Enterprises
17	Dr. Dheeraj Mishra Assistant Professor	National Seminar	November, 3-4, 2018	Government Girls P.G. College, Banda	National Seminar on Role of Women in New India.
18	Dr. Bhanu Prakash Mishra Associate Professor	National Seminar	November, 3-4, 2018	Government Girls P.G. College, Banda	National Seminar on Role of Women in New India.
19	Dr. B.K. Gupta Assistant Professor	National Seminar	November, 3-4, 2018	Government Girls P.G. College, Banda	National Seminar on Role of Women in New India.
20	Dr. Gaurav Shukla Assistant Professor	Seminar	November, 3-4, 2018	Government Girls P.G. College, Banda	National Seminar on Role of Women in New India.
21	Dr. Bhanu Prakash Mishra Associate Professor	National Conference	November 15-17, 2018	CAU, Ranipool, Gangtok, Sikkim	National Extension Education Congress 2018
22	Dr. B.K. Gupta Assistant Professor	National Conference	November 15-17, 2018	CAU, Ranipool, Gangtok, Sikkim	National Extension Education Congress 2018
23	Dr. Hitesh Kumar Assistant Professor	Winter School	November 22 to December 12, 2018	Centre for Plant Breeding and Genetics Tamil Nadu Agricultural University, Coimbatore	Application of molecular markers in crop breeding

24	Dr. Pankaj Kumar Ojha Assistant Professor	Winter School	Nov 28- Dec 18, 2018	ICAR-NAARM, Hyderabad	ICT Interventions in Agricultural
25	Dr Dinesh Sah Associate Professor	Training program	December 4-7, 2018	NAARM Hyderabad	Impact assessment of Agricultural Research and Technology
26	Dr. Amit Kumar Singh Assistant Professor	Regional Workshop	December 18-19, 2018	BUAT, Banda	MIDH-Regional Workshop on Harnessing the Potential of Spices Production in Bundelkhand region, UP : Issues and Strategies
27	Dr. Dheeraj Mishra Assistant Professor	Regional Workshop	December 18-19, 2018	BUAT, Banda	MIDH-Regional Workshop on Harnessing the Potential of Spices Production in Bundelkhand region, UP : Issues and Strategies
28	Dr. B.K. Gupta Assistant Professor	Regional Workshop	December 18-19, 2018	BUAT, Banda	MIDH-Regional Workshop on Harnessing the Potential of Spices Production in Bundelkhand region, UP : Issues and Strategies
29	Dr. M.K. Mishra Assistant Professor	Workshop	December 18-19, 2018	BUAT, Banda	MIDH-Regional Workshop on Harnessing the Potential of Spices Production in Bundelkhand Region U.P. : Issues and Strategies
30	Umesh Chandra Assistant Professor	Conference	December 20-22, 2018	Jaypee University, Solan, HP	5 th International Conference on Parallel Distributed and Grid Computing (IEEE)
31	Dr. Pankaj Kumar Ojha Assistant Professor	International Seminar	Decembber 22-24, 2018	BHU, Varanasi	International Seminar of Global Partnership in Agricultural Education and Research
32	Dr. Mayank Dubey Assistant Professor	International Seminar	December 22-24, 2018	BHU, Varanasi (UP)	International Seminar on Global Partnership in Agricultural Education and Research
33	Dr. Dheeraj Mishra Assistant Professor	International Seminar	December, 22-24, 2018	BHU, Varanasi	International Seminar of Global Partnership in Agricultural Education and Research
34	Dr. Bhanu Prakash Mishra Assistant Professor	International Seminar	December, 22-24, 2018	BHU, Varanasi	International Seminar of Global Partnership in Agricultural Education and Research

35	Dr. B.K. Gupta Assistant Professor	International Seminar	December, 22-24, 2018	BHU, Varanasi	International Seminar of Global Partnership in Agricultural Education and Research
36	Dr. Amit Kumar Singh Assistant Professor	International Seminar	December, 22-24, 2018	BHU, Varanasi	International Seminar of Global Partnership in Agricultural Education and Research
37	Dr. Aniket Hanumant Kalhapure Assistant Professor	Winter School	January 03 to 23, 2019	CIAE, Bhopal	Recent Advances in Micro-Irrigation and Fertigation Systems for Improved Input Use Efficiency of Open and Covered Cultivation through Engineering Interventions
38	Dr. Gaurav Shukla Assistant Professor	Winter School	January 10-30, 2019	IASRI, New Delhi	Winter School on Recent Advances in Statistical Technique for data analysis in agriculture.
39	Dr. M.K. Mishra Assistant Professor	Convention	January 28-29, 2019	New Delhi	National Convention on Integrated Agriculture-Prosperous Bharat (Agri-Vision, 2019)
40	Dr Amit Mishra Assistant Professor	Poster presentation	January, 28-29, 2019	NASC, Pusa, New Delhi	4 th Agrivision 2019, National Convention on integrate agriculture prospers Bharat
41	Dr. G.S. Panwar Professor	43 rd VC Convention	February, 2-5, 2019	PAU, Ludhiana	Artificial Intelligence for Smart Agriculture
42	Dr. Umesh Chandra Assistant Professor	43 rd VC Convention	February, 2-5, 2019	PAU, Ludhiana	Artificial Intelligence for Smart Agriculture
43	Dr. Amit Kumar Singh Assistant Professor	Winter School	February, 5-25, 2019	BUAT, Banda	MANAGE-BUAT collaborative winter school on 'Appropriate agricultural technologies and extension approaches for doubling farmers' income'
44	Dr. Dheeraj Mishra Assistant Professor	Agri UNIFEST	February 3-7, 2019	SKDAU, Sardarkrushinagar, Dantiwada, Gujarat	19 th All India Inter Agricultural Universities Youth Festival
45	Dr. Umesh Chandra Assistant Professor	Conference	February 8-9, 2019	KNIT, Sultanpur	2 nd International Conference on Advance Computing and Software Engineering (ICACSE-2019)
46	Dr. A.K. Tripathi Associate Professor	International Conference	February 16-19, 2019	IISR, Kanpur	Sugarcon-2019

47	Dr. M.K. Mishra Assistant Professor	Conference	February 22-23, 2019	Ajmer (Rajasthan)	National Conference on Sustainable Agricultural & Recent Trend in Science and technology (NCSARTST-2019)
48	Umesh Chandra Assistant Professor	Conference	February, 22-23, 2019	ABES, Ghaziabad	5 th International Conference on Computational Intelligence and Communication Technology (CICT 2019, Springer)
49	Umesh Chandra Assistant Professor	Conference	February, 25-26, 2019	DBIT, Dehradun	National Conference on Recent Trends in Computational Intelligence and Communication Technology
50	Dr. Pankaj Kumar Ojha Assistant Professor	Workshop	February 26, 2019	BUAT, Banda	One Day Workshop on Consortium for e-Resources in Agriculture
51	Dr. Gaurav Shukla Assistant Professor	Workshop	February 26, 2019	BUAT, Banda	One Day Workshop on Consortium for e-Resources in Agriculture
52.	Dr. Dheeraj Mishra Assistant Professor	Workshop	February 26, 2019	BUAT, Banda	One Day Workshop on Consortium for e-Resources in Agriculture
53.	Dr. B.K. Gupta Assistant Professor	Workshop	February 26, 2019	BUAT, Banda	One Day Workshop on Consortium for e-Resources in Agriculture
54.	Umesh Chandra Assistant Professor	Workshop	February 26, 2019	BUAT, Banda	One Day Workshop on Consortium for e-Resources in Agriculture
55.	Dr. Gaurav Shukla Assistant Professor	Conference	March, 1-2, 2019	Invertis University, Bareilly	3 rd International Conference on Recent Advances in Science.

ANNEXURE-IV

Faculties of College of Horticulture participated in Capacity Development Programmes

Sl. No.	Name & Designation	Nature of programme	Date	Venue	Theme of the Programme
1	Dr. Punam Pandey, Assistant Professor	National Conference	April, 2018	Mangayarkarasi College of Arts and Science for Women Paravai, Madurai Tamilnadu	Social Perspectives in Contemporary English Literature
2	Dr. Sunil Kumar, Assistant Professor	One day Seminar on	April 23, 2018	Malviya Hall, Lucknow University	“KhetKhalihan se Rush Iran tak”
3	S. V. Dwivedi Professor	Workshop cum review meeting of ELP modules	May 25-26, 2018	Dr. YSPUHF, Nauni, Solan	Review meeting of ELP modules established at various places
4	Er. Harshad Assistant Professor	Summer School , Training Programme	September 4-24, 2018	Central Institute of Post Harvest Engineering and Technology , Ludhiana	Emerging Postharvest Engineering and Technological Interventions for Enhancing Farmer’ s Income
5	S. V. Dwivedi Professor	XXVI Group Meeting of AICRP-MAP&B	September 28-30, 2018	AAU, Jorhat	Review meeting of trails conducted and action plan of coming year
6	S. V. Dwivedi Professor	Mid-Term Review workshop of KVKs	October 9-10, 2018	BUAT, Banda	Review of progress report and action plan of kvks , Chaired one of the session in the workshop
7	Dr. PriyaAwasthi Associate Professor	International Conference	October 28-30, 2018	RARI, Jaipur, Rajasthan	International Conference on Global Research for Sustainable agriculture & allied Sciences
8	Dr. Ajay Kumar Singh, Associate Professor	Conference	November 11-13, 2019	MPUAT Udaipur, Rajasthan	National Conference on Ornamental Horticulture to uplift rural economy
9	Dr. Ajay Kumar Singh, Associate Professor	International conference	November 13 -17, 2018	Bali, Indonesia	2 nd Global Meet on science & technology for ensuring quality life (GMST 2018)
10	Dr. Punam Pandey, Assistant Professor	National conference	November 14-15, 2018	Dept. of English BHU	History, Myth and Orality: Cultural and Literary Traditions in India

11	Mr. Krishna Singh Tomar, Assistant Professor	Training of Trainers	November 26-28, 2018	KrishiVistarSadon, Pusa, New Delhi	Training of Trainers (ToT) of Gardener
12	Dr. Priya Awasthi Associate Professor	In 3 days Capacity Building Programme	November 28, 2018	College of Horticulture	Production Technology for high value pulse crops in Bundelkhand Region
13	Dr. Shweta Soni, Assistant Professor	Winter School	November 27 to December 17, 2018	Central Arid Zone Research Institute, Jodhpur (Rajasthan)	Recent Approaches in Horticultural Development for Enhancing Farm Income in Environmentally Constraints Ecosystem
14	Dr. Vishal Chugh, Assistant Professor	Winter School	December 10-30, 2018	Rajasthan Agricultural Research Institute, Jaipur	Advances in Agricultural techniques to Enhance Crop Production towards Climate Resilient Agriculture
15	Dr. Neetu Assistant Professor	Winter School training programme	December 11-31, 2018	Division of Agronomy, ICAR, New Delhi	Good Agricultural Practices for Doubling Farmers Income and Enhanced Resource Use Efficiency
16	Dr. Sunil Kumar, Assistant Professor	Vegetable Science Congress	February 1-3, 2019	Agriculture university Jodhpur, Rajasthan	1 st Vegetable Science Congress on emerging Challenges in Vegetable research and education (VEGCON-2019)
17	Mr. Krishna Singh Tomar, Assistant Professor	MANAGE Sponsored Winter School	February 5-25, 2019	BUAT, Banda	Appropriate Agricultural Technologies and Extension Approaches for DFI
18	Dr. Rajesh Kumar Singh, Associate Professor	International conference	February 9-12, 2019	Pune	International Symposium on Edible Alliums: Challenges and Opportunities Pune, Maharashtra
19	Dr. A.C. Mishra Associate Professor	National Conference	February 16-17, 2019	UTI, Dehradun	Climate Change: Plants, People and Planet
20	Dr. Rajesh Kumar Singh, Associate Professor	Conference	March 23-24, 2019	University of Madras, Chennai	International Society of Noni Science (ISNS) at University of Madras, Guindy Campus Chennai.

ANNEXURE-V

Faculties of College of Forestry participated in Capacity Development Programmes

Sl. No.	Name & Designation	Nature of programme	Date	Venue	Name of the Programme
1.	Dr. Vinita Bisht Assistant Professor	Winter School	August 28-September 17, 2018	CAZRI,	Designing farming system for enhancing income and resilience in low rainfall areas under climate change scenario
2.	Dr. Abhishek Kalia Assistant Professor	Winter School	November 02-22, 2018	Banaras Hindu University, UP	Action Research for making farmers equal partners in organized food retails
3.	Dr. A K Gupta Assistant Professor	Training of Trainers	November 26-28, 2018	IARI, Delhi	Training of Trainers (TOT) Programme under MIDH in New Delhi
4.	Dr. M Nasir Assistant Professor	Workshop	November 28-December 05, 2018	ICAR-IINRG, Ranchi	Recent advances in high value products and industrial applications of natural polymers
5.	Dr. Shalini Purwar Assistant Professor	Winter School	December 17, 2018 -January 01, 2019	Allahabad University, UP	A workshop of Hands on techniques used in biotechnology
6.	Dr. Kaushal Singh Assistant Professor	Workshop	December 14-21, 2018	NBRI, Lucknow	Classical and Modern Methods in plant taxonomy and biosystematics
7.	Dr. Bhalendra Singh Rajput, Dr. Dinesh Gupta, Dr. Monika Jain & Dr. Vinita Bisht Assistant Professors	Training Programme	December 18-19, 2018	BUAT, Banda	MIDH- Regional Workshop on Harnessing the Potential of Spice Cultivation in Bundelkhand
8.	Dr. Monika Jain Assistant Professor	Workshop	February 11-15, 2019	IIFM, Bhopal	Environmental Leadership
9.	Dr. Bhalendra Singh Rajput & Dr. A K Gupta Assistant Professors	MANAGE Sponsored Winter School	February 05-25, 2019	BUAT, Banda	Appropriate Agricultural Technologies and Extension Approaches for DFI



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