



वार्षिक | Annual प्रतिवेदन | Report

2019-2020



आचार्य नरेन्द्र देव कृषि एवं प्रौद्योगिक विश्वविद्यालय
Acharya Narendra Deva University of Agriculture and Technology
Kumarganj, Ayodhya-224229, UP



ICAR - BEST AICRP CENTRE AWARD

ANDUAT has received
"Best AICRPS Centre Award 2018-19"
during XXX Workshop at Coimbatore
on November 14th 2019

वार्षिक | Annual प्रतिवेदन | Report

2019-2020



आचार्य नरेन्द्र देव कृषि एवं प्रौद्योगिक विश्वविद्यालय
Acharya Narendra Deva University of Agriculture and Technology
Kumarganj, Ayodhya-224229 (UP)
website: www.nduat.org

Patron

Prof. Bijendra Singh, Vice Chancellor

Chief Editor

Dr. Harish Chandra Singh, Chairman, Co-ordination Cell

EDITORIAL BOARD



Dr S. K. Maurya

Dr. Ved Prakash

Dr. Umesh Chandra

Dr Saurabh Verma

Dr. R. R. Singh

Dr Sadhna Singh

Dr. Satyavrat Singh

Dr P. K. Mishra

Dr. Alok Kumar Pandey

Dr. Utkarsh Tripathi

Dr. Akhilesh Singh

Sri Amar Jeet Singh

Published by: Dr. P.K. Singh, Registrar, ANDUAT, Kumarganj, Ayodhya

Printed by: M/s. BAKHSHISH

Kanpur Road, Alambagh, Lucknow-226005 Tel: 0522-4043314, 9415004709

PREAMBLE

In India, where more than 58 per cent of the rural households depend on agriculture which is principal means of their livelihood. Agriculture, along with animal husbandry, fisheries and forestry, is one of the largest contributors to the Gross Domestic Product (GDP).



Agriculture is demographically the broadest economic sector in case of Uttar Pradesh. It played a significant role in improving the social as well as economic fabric of India. Uttar Pradesh is one of the major contributors to the national food grain stock. The fertile region of the Indo-Gangetic plain contributes much in agricultural development of the state. Even globally, agriculture provides a livelihood for more people than any other industry. Uttar Pradesh has been a great producer of food grains in India since 1950. Its high-yielding varieties (cereal, pulses, oil-seed), availability of fertilizers and irrigation helped a great deal in contributing in India's agriculture. Pulses, wheat, rice, potatoes and oil seeds are the major agricultural products produced in the state. Sugarcane is the most important cash crop of Uttar Pradesh. As far as horticulture is concerned, Uttar Pradesh is an important state. Livestock and animal husbandry sectors are another important part of agriculture as it contributes around 26% of agriculture GDP. In livestock sector, Uttar Pradesh alone contributes around 15% of India's livestock population.

Growth in agriculture production and productivity is needed to raise rural incomes to support the increasing numbers dependent on the industry and to meet the food and raw material needs for faster growing urban populations. Thus, there is always a great responsibility on agriculture universities towards sustained growth, production of knowledgeable manpower as well as transfer of current technology at field level.

To maintain the quality in agriculture education, the University has made concerted efforts for submitting the long awaited self study report (SSR) to the NAEAB, ICAR, New Delhi and the Peer Review Team (PRT) constituted by ICAR visited the University in February, 2020 and appraised the activities and developments of the University and we await a positive response.



As the University is named after most profound socialist, agricultural activist and teacher “Acharya Narendra Deva”; it was a long felt need to incorporate “Acharya” before the name of the University. Thanks to the philosophy of current government that this task could be completed. State government changed the name of this University as “Acharya Narendra Deva University of Agriculture & Technology” Ayodhya by an extra ordinary gazette notification on August 5th, 2019. Likewise, the change in the name of district was also notified by the same gazette.

The Acharya Narendra Deva University of Agriculture & Technology is committed to provide its share towards the upliftment of agriculture and rural livelihood by developing new and improved varieties of crops, fruit and vegetables, by providing good germ plasm to the livestock, poultry and fishes and by producing good quality students that are ready to work under any circumstances. To achieve these goals, several research projects funded by various agencies like IRRI (Philippines, Manila), ICAR, RKVY, UPCAR and other National agencies are in operation. The University produced quality seeds: for Rabi crops **2789.98** quintals and for Kharif and Zaid crops and **2750.23** quintals during the year of 2019-2020..

I am glad to present an overview and achievements of various Colleges, Directorates and different units and sections of this University, through this Annual Report for the year 2019-2020.

(Bijendra Singh)
Vice-Chancellor

कार्यकारी सारांश

विश्वविद्यालय के नाम में परिवर्तन

राज्य सरकार ने आचार्य नरेन्द्र देव जी के सम्मान में 5 अगस्त 2019 को एक विशेष राजपत्रित अधिसूचना द्वारा इस विश्वविद्यालय का नाम **आचार्य नरेन्द्र देव कृषि एवं प्रौद्योगिक विश्वविद्यालय अयोध्या** के रूप में परिवर्तित करा दिया। इसी तरह जिले नाम में भी परिवर्तन उसी गजट द्वारा अधिसूचित किया गया।

राष्ट्रीय कृषि शिक्षा प्रत्यायन बोर्ड (NAEAB) की विशेष समीक्षा टीम (PRT) का विश्वविद्यालय भ्रमण

विश्वविद्यालय के विभिन्न महाविद्यालयों में संचालित विविध पाठ्यक्रमों के प्रत्यायन हेतु विश्वविद्यालय ने NAEAB भारतीय कृषि अनुसंधान परिषद को अपनी स्वमूल्यांकन रिपोर्ट प्रेषित की और तत्पश्चात् भारतीय कृषि अनुसंधान परिषद की एक विशेष समीक्षा टीम ने प्रत्यायन प्रदान करने से पूर्व विश्वविद्यालय द्वारा प्रस्तावित मदों की समीक्षा करने के लिये फरवरी 2020 के दौरान विश्वविद्यालय का भ्रमण कर विधिवत् समीक्षा किया।

संस्थागत पशु आचार समिति (IAEC) की स्थापना

पशुओं पर आधारित शोध कार्यों के सुचारू रूप से संचालन हेतु मार्च 2019 में विश्वविद्यालय का पंजीकरण CPCSEA (पशु शोध कार्यों के नियंत्रण एवं पर्यवेक्षण हेतु गठित राष्ट्रीय समिति) के द्वारा कराया गया जो कि छोटे बड़े पशुओं पर किये जाने वाले शोध के लिये एक आवश्यक नियामक है। पशुचिकित्सा एवं पशुपालन महाविद्यालय में इस क्षेत्र पर आधारित शोध कर रहे छात्रों एवं शिक्षकों द्वारा यह पंजीकरण काफी समय से लम्बित था।

विश्वविद्यालय परिसर का सौन्दर्यीकरण

विश्वविद्यालय परिसर की पर्यावरण विविधता बनाये रखने हेतु तथा वातावरण के चिरकालिक संरक्षण हेतु विश्वविद्यालय परिसर के शस्य विज्ञान प्रक्षेत्र पर अखिल भारतीय समन्वित शुष्क कृषि परियोजना के अन्तर्गत एक **'वर्षा जल संचयन तालाब'** बनवाया गया। परिसर के भीतर कृषि अवशेषों और सामान्य घरेलू कचरों के निस्तारण और उचित प्रबन्धन के लिए उनका उपयोग केंचुआ खाद उत्पादन हेतु किये जाने की व्यवस्था की गयी।

सर्वोत्तम AICRP पुरस्कार

इस विश्वविद्यालय के अन्तर्गत संचालित अखिल भारतीय समन्वित **मसाला परियोजना की इकाई** को वर्ष 2018-19 के लिये सर्वोत्तम 'मसाला परियोजना इकाई' के रूप में पुरस्कृत किया गया। यह पुरस्कार समन्वित परियोजना की 30वीं कार्यशाला में प्रदान किया गया जो 14-16 नवम्बर, 2019 को आयोजित की गयी थी।

अन्य संस्थानों एवं संगठनों के साथ सम्बन्ध

छात्रों को बेहतर शिक्षा एवं अनुसंधान प्रदान करने के लिये विश्वविद्यालय और विभिन्न राष्ट्रीय एवं अन्तरराष्ट्रीय संगठनों और संस्थानों के बीच कुल 13



आधारभूत संरचना

समझौता ज्ञापनों पर हस्ताक्षर किये गये हैं।

शिक्षण सुविधा के उन्नयन के लिये कृषि महाविद्यालय एवं पशुचिकित्सा एवं पशुपालन महाविद्यालय में केन्द्रीय प्रयोगशालाओं और स्मार्ट क्लासरूम की स्थापना की गयी। कृषि महाविद्यालय में मशरूम कल्टीवेशन यूनिट की भी स्थापना की गयी।

छात्रों की उपलब्धियां

विश्वविद्यालय के छात्रों ने विभिन्न राष्ट्रीय स्तर की परीक्षाओं में उत्कृष्ट प्रदर्शन किया। वर्ष 2019–20 में कुल 37 छात्रों ने स्नातकोत्तर पाठ्यक्रमों में प्रवेश हेतु आई.सी.ए.आर. जे.आर.एफ. परीक्षा उत्तीर्ण किया। 16 छात्रों ने आई.सी.ए.आर. एस.आर.एफ. प्रवेश परीक्षा द्वारा पीएच0डी0 पाठ्यक्रमों में प्रवेश सुनिश्चित किया तथा 15 विद्यार्थियों ने ए.एस.आर.बी. नेट की परीक्षा उत्तीर्ण की और 2 छात्रों ने तकनीकी विषयों में शोध हेतु आवश्यक गेट की परीक्षा उत्तीर्ण की।

छात्रों का प्लेसमेन्ट

विश्वविद्यालय के 7 स्नातकोत्तर छात्रों को प्राइवेट महाविद्यालयों में सहायक प्राध्यापक पद पर नियुक्ति मिली। ये छात्र कृषि महाविद्यालय में विभिन्न विभागों में शोध छात्र थे। विश्वविद्यालय से उत्तीर्ण होने वाले छात्रों के लिये रोजगार के अवसर प्रदान करने के लिये विश्वविद्यालय का प्लेसमेन्ट सेल निरन्तर कार्यरत है और अनेक कम्पनियों के कैम्पस साक्षात्कार आयोजित करा चुका है। इस सत्र में 67 छात्रों का चयन विभिन्न प्राइवेट संस्थानों में कराया जा चुका है।

छात्रवृत्तियां

शैक्षणिक वर्ष 2019–20 के दौरान, विभिन्न वर्गों के छात्रों को उत्तर प्रदेश सरकार के समाज कल्याण विभाग, अन्य पिछड़ा वर्ग विभाग और अल्पसंख्यक विभाग के माध्यम से विभिन्न छात्रवृत्तियां एवं शुल्क प्रतिपूर्तियां प्रदान की गयी। इन छात्रवृत्तियों से लगभग 1389 छात्र लाभान्वित हुये। इन छात्रवृत्तियों के अलावा छात्रों को मण्डी परिषद छात्रवृत्ति, डी0एस0टी0 इन्सपायर फेलोशिप एवं इण्डो-अफगान छात्रवृत्ति भी प्राप्त हुई।

फसलों की विकसित किस्में

धान की प्रजातियों: एन.डी.आर.-9930111 एवं आई.आर.-64 सब-1 को केन्द्रीय प्रजाति संस्तुति समिति को अधिसूचना हेतु प्रेषित किया गया।

दलहन की चार प्रजातियों: नरेन्द्र मटर-1, नरेन्द्र मटर-2, नरेन्द्र चना-1/एन. डी.जी. 14-11 और चने की प्रजाति एन.डी.जी. 15-02 को राज्य प्रजाति संस्तुति समिति को संस्तुति हेतु प्रेषित किया गया।

धान की एन.डी.जी.आर-702, लौकी की एन.डी.बी.जी.-16, गेहूं की एन. डब्ल्यू-6046, जौ की एन.डी.बी.-1665 और एन.बी.डी.-1673 प्रजातियों को राज्य स्तरीय परीक्षणों में उपयुक्त पाये जाने पर संस्तुति हेतु प्रेषित किया गया।

राजस्व

राजस्व के आन्तरिक स्रोतों में छात्रों से प्राप्त शुल्क और अन्य स्रोतों जैसे खेतों की उपज, बीज, संस्थागत शुल्क आदि से वित्तीय वर्ष 2019-20 में 16.43 करोड़ रुपये का राजस्व प्राप्त हुआ।

बीज उत्पादन

विश्वविद्यालय एवं किसानों के प्रक्षेत्रों पर प्रमुख फसलों के अतिरिक्त फसलों की नवीनतम किस्मों के बीजों का उत्पादन भागीदारी के तौर पर बड़े पैमाने पर किया जा रहा है। विश्वविद्यालय ने खरीफ एवं जायद फसलों के 2750.23 क्विंटल तथा रबी फसलों के 2789.98 क्विंटल बीज का उत्पादन किया।

ग्रामीण कृषि मौसम सेवा

ग्रामीण कृषि मौसम सेवा के अन्तर्गत 5 दिनों के मौसम के पूर्वानुमान का किसानों की मातृभाषा में अनुवाद किया गया। जिला स्तर के मौसम के पूर्वानुमान के लिए एग्रोमेट-डी.एस.एस. साफ्टवेयर के द्वारा विभिन्न विषयों के विशेषज्ञों के परामर्श से निर्मित कर, प्रत्येक जिले के लिये जारी की गयी। जिला स्तर का मौसम पूर्वानुमान और एग्रोमेट एडवाइजरी आकाशवाणी अयोध्या को भेजी गयी।

अनुसंधान गतिविधियां

- वर्ष 2019-20 में विभिन्न अनुसन्धान परियोजनाओं के प्रस्ताव वित्त-पोषित संस्थाओं को अनुमोदन हेतु भेजे गये उनमें से 03 अनुमोदित हो चुके हैं। वर्तमान में कुल 55 अनुसन्धान परियोजनायें विश्वविद्यालय में चल रही हैं।
- स्थानीय रूप से उपलब्ध कृषि उत्पादों और प्राकृतिक संसाधनों का उपयोग करके कम लागत के सन्तुलित आहार बनाये जा रहे हैं।
- चारे के उत्पादन, मछली पालन, मुर्गी पालन और बागवानी फसलों के लिये 6.1 हेक्टेयर भूमि को विकसित कर एक नया एकीकृत खेती माडल एन.एस. पी.-6 पर विकसित किया जा रहा है।
- एकीकृत कृषि प्रणाली के अन्तर्गत उन्नत जल प्रबन्ध तकनीकियों को कृषकों को स्थानान्तरित किया गया। एकीकृत शुष्क खेती प्रणाली के अन्तर्गत विभिन्न माड्यूल पर कृषकों के खेतों पर उनकी परिस्थितियों में कार्य किया जा रहा है और नयी तकनीक विकसित की जा रही है।
- शस्य विज्ञान प्रक्षेत्र पर एक हेक्टेयर भूमि पर एकीकृत कृषि प्रणाली के अन्तर्गत शुद्ध आय रू0 62639/- प्रति हेक्टेयर प्राप्त हुई।
- आलू-प्याज खेती पद्धति के अन्तर्गत आलू की बुआई 25 अक्टूबर से लेकर 5 नवम्बर तक तथा हारवेस्टिंग 90 दिन के अन्तराल पर करके तत्पश्चात् प्याज की रोपाई की तकनीक लाभकारी प्राप्त हुई।
- क्षारीय भूमि में पौधा रोपण की तकनीक विकसित की गयी।

विश्वविद्यालय के समस्त के0वी0के0, के0जी0के0 अनुसन्धान केन्द्र और बीज उत्पादन केन्द्र अनुसंधित तकनीकों के प्रदर्शन और नई समस्याओं के बारे में



प्रसार

प्रतिक्रिया प्राप्त करने के लिये किसानों के लिये प्रशिक्षण, क्षेत्र प्रदर्शन, गोष्ठी, सर्वेक्षण आदि कार्यक्रम नियमितरूप से करते रहते हैं।

विश्वविद्यालय समर्थित किसान संगठन 'नरेन्द्र देव कृषक समिति' विभिन्न जिलों में नियमित रूप से किसान-वैज्ञानिक संपर्क कार्यक्रम आयोजित कर रहा है। समिति प्रत्येक माह निश्चित तिथियों पर विश्वविद्यालय के वैज्ञानिकों एवं किसानों के बीच चर्चा की सुविधा प्रदान करती है। यह विश्वविद्यालय के क्षेत्राधिकार के विभिन्न हिस्सों से प्रतिक्रियायें प्राप्त करने का अवसर प्रदान करता है।

- विश्वविद्यालय पी.आर.ए. विधियों के माध्यम से जिले के रणनीतिक अनुसन्धान और विस्तार योजना (एस.आर.इ.पी.) के विकास की सुविधा प्रदान कर रहा है। अब तक विश्वविद्यालय क्षेत्र के 20 जिलों के एस.आर.ई.पी. तैयार किये गए हैं। तैयार किये गये एस.आर.ई.पी. में जिले की पृष्ठभूमि की जानकारी, जिले में संस्थागत व्यवस्था, प्राकृतिक संसाधन प्रबंधन की स्थिति, मौजूदा कृषि प्रणाली का विश्लेषण, कृषि-पारिस्थितिक स्थिति वार समस्यायें, एस.डब्ल्यू.ओ.टी. विश्लेषण, प्रौद्योगिकी अंतर विश्लेषण, विस्तार अनुसंधान रणनीति एवं कार्य योजनाएं शामिल हैं। उपर्युक्त के रूप में उपलब्ध जानकारी वैज्ञानिकों और विस्तार शिक्षा इकाइयों को स्थान विशेष की मांग के अनुसार अपने कार्यक्रमों का संचालन करने का अवसर प्रदान करती है।

किसान तकनीकी परामर्श सेवायें

विश्वविद्यालय विभिन्न विभागों एवं एजेन्सियों के माध्यम से प्रौद्योगिकी हस्तान्तरण की परियोजनाओं/कार्यक्रमों को प्रमुखता से लागू कर रहा है। यह सेवा फार्म सलाहकार, सूचना एवं संचार सेवा, प्रशिक्षण एवं कृषि प्रौद्योगिकी सूचना केन्द्र (ATIC) के माध्यम से दी गयी है। वर्ष 2019-20 के दौरान 2242 किसानों को काल सेन्टर, 883 किसानों को यात्राओं, 1777 किसानों को मिनी किट, 800 किसानों को तकनीकी बुलेटिन एवं डायरी के माध्यम से लाभान्वित किया गया।

किसानों के खेतों पर परीक्षण

किसानों की स्थानीय जरूरतों एवं मौजूदा समस्याओं को दृष्टिगत रखते हुए सभी के0वी0के0 के द्वारा 666 किसानों के खेतों पर 126 प्रक्षेत्र परीक्षण आयोजित किये गये जिनमें से फसलों पर 90, लाइव स्टाक प्रबन्धन पर 14 और विभिन्न उद्यमों पर 22 परीक्षण आयोजित कर प्रेरित किया गया।

अग्रिम पंक्ति प्रदर्शन

विश्वविद्यालय में विभिन्न के0वी0के0 के माध्यम से वर्तमान में अग्रणी कृषि तकनीकों जैसे विभिन्न फसलों की नयी प्रजातियां, धान के रापाई की एस.आर.आई., ड्रम सीडिंग और डी.एस.आर. का प्रदर्शन, जैव उर्वरकों एवं जैव कीटनाशकों का उपयोग, संसाधन संरक्षण प्रौद्योगिकी, सटीक कृषि, एकीकृत

मछली पालन और लाइव स्टाक उत्पादन एवं प्रबंधन पर 3778 किसानों के 1125.64 हेक्टेयर भूमि पर व्यापक प्रदर्शन किये गये। वर्ष 2019-20 के दौरान पशुधन और मत्स्य पालन उद्यमों पर 188 प्रदर्शन किये गये।

किसानों का प्रशिक्षण

विश्वविद्यालय अपने के0वी0के0 के माध्यम से किसानों एवं कृषक महिलाओं के लिये 1957 पाठ्यक्रम, ग्रामीण युवाओं के लिये 343 पाठ्यक्रम, विस्तार अनुदान के लिये 183 पाठ्यक्रम, प्रायोजित प्रशिक्षण के 87 पाठ्यक्रम और व्यवसायिक प्रशिक्षण के लिये 157 पाठ्यक्रम संचालित किये हैं जिनके माध्यम से कुल 2727 आयोजित पाठ्यक्रमों से 68235 लोगों को प्रशिक्षित किया गया।



EXECUTIVE SUMMARY

Change in the Name of University

State government changed the name of this University as “Acharya Narendra Deva University of Agriculture & Technology” Ayodhya by an extra ordinary gazette notification on August 5th, 2019 in the honour of Acharya Narendra Deva Ji. Likewise, the change in the name of district was also notified by the same gazettee.

Visit of PRT for Accreditation with NAEAB

The University submitted its self study report to NAEAB, ICAR for accreditation; and the peer review team of ICAR visited the University during February 2020.

Establishment of Institutional Animal Ethics Committee (IAEC)

University got itself registered to CPCSEA for the purpose of experiment on small and large animals in March 2019 and the first meeting of IAEC was held on April 10th, 2019. This committee was a long awaited for the need of students and faculty dealing with animal research.

Campus Initiative

The initiative for making the campus eco-friendly and to protect environment a **Rain Water Harvesting Pond** was developed under AICRP- Dry Land Agriculture at the Agronomy Research Farm. The bio dragadable wastes from hostels and campus houses are being used for development of vermi-compost. Proper waste disposal of campus wastes were also ensured.

Best AICRP Award

AICRP on spices of the University was awarded the **Best AICRP center** for the year 2018-19. The award was received in the 30th workshop of ICAR-All India coordinated research project on spices held from November 14-16, 2019.

Linkages with other Institutes & Organizations

The University signed a total of 13 memorandum of understanding (MoUs) with various national and international organizations to provide better education and research exposure to the students and faculties. The university also initiated student sandwich programs and established industrial linkages in an attempt to expand their power of wisdom by field exposures. In collaboration with Medha learning foundation a series of career development boot camps were organized to uplift the persona of the students imbibe confidence in them and prepare them in a better way to face interviews.

Infrastructure development

Teaching and research was given a boost by upgradation of central laboratories and establishment of smart class rooms in the College of Agriculture & College of Veterinary Science. Mushroom Cultivation Unit was also established to impart hands on training to students of College of Agriculture,

Students' Achievement

The university students excelled in various exams like ICAR JRF, SRF, NET etc. Thirty seven students qualified ICAR JRF/ PG scholarship; 16 ICAR SRF (PhD) scholarships and 15 students qualified NET, while 2 students have qualified GATE during 2019-20.

Placement of students

Seven post graduate students were selected in private colleges as Assistant Professor in different discipline of agriculture viz. Agronomy, Plant Protection, Genetics and Plant Breeding, Agricultural Economics. To facilitate the employment to outgoing students the placement cell is actively working and several campus interviews have been organized. Around 67 students have been selected through campus interviews in various private organizations. Thirteen students were selected for the post of Sales Executive by campus interview on 07.06.2019 by Dayal Group, Lucknow.

Scholarships

During the academic year 2019-20, the students of different categories got scholarships and fee reimbursement from the Social Welfare, Other Backward Class and Minority departments of U.P. Government. A total of 1389 students were benefitted by these scholarships. Apart from these scholarships students also received Mandi Parishad Scholarship, DST Inspire Fellowship and Indo-Afghan Scholarships.

Varieties Developed

Rice varieties: NDR-9930111 and IR64 Sub-1 were submitted to CVRC for notification.

In pulses, 4 varieties: Narendra Matar-1, Narendra Matar-2, Narendra Chana-1/ NDG14-11 and Chickpea NDG15-02 were submitted for release to SVRC.

Rice entries: NDGR-702; Bottlegourd: NDBG-16, Wheat: NW-6046, Barley: NDB-1665 and NDB 1673 have been identified for release as found promising in state level trials.



Revenue generated

The internal sources of revenue includes fees such as registration, tuition, lab, medical examination, library fee, sports, magazine, room accommodation etc collected from the students. Other sources include the revenue generated through the sale of farms produce, seeds, bank interests, institutional charges etc. The revenue generated during the year 2019-2020 was 16.43 crores.

Seed Production

Seed Production activities especially of newly developed and demand driven varieties of major crops have been taken up on massive scale at University as well as farmer's field on participatory mode. University produced 2750.23 quintals of seeds of Kharif and Zaid crops and 2789.98 quintals seeds of Rabi crops.

Gramin Krishi Mausam Sewa (GKMS)

Under GKMS, 5 days forecast were translated in to farmer's language. According to district level weather forecast, Agromet-advisory bulletins were prepared through Agromet-DSS software with consultation of different subject matter specialist's viz., Agronomy, Vegetable Science, Horticulture, Entomology and Plant Pathology, etc. for each districts of eastern plain zone of U.P. separately. District level weather forecasts & agromet-advisories were sent to AIR, Ayodhya.

RESEARCH ACTIVITIES

- During 2019- 20, various research project proposals have been submitted to various funding agencies for approval and 03 of them have already been approved. In the current year, a total of 55 research projects are running in the university.
- Low cost feed using locally available agricultural products and natural resources have been developed.
- A new farm (NSP-6) is being developed by reclamation of 6.1 hectare wasteland (user bhumi) for fodder cultivation, fish farming and horticulture crops and goat farm is also being planned.
- University is establishing State of Art Feed analysis laboratory under RKVY at Department of Animal Nutrition.
- Improved water management practices and multiple use of water for integrated farming system technologies were transferred to the farmers and also refined.
- Rain fed integrated farming systems with different modules are being developed at farmers' field.
- Integrated farming model of one hectares at Agronomy research farm gave gross income of Rs. 187749/ha and net income of Rs. 62639/ha.

- Planting of potato from 25 October to 5th November & harvested at 90 days followed by transplanting of onion there after is recommended for potato - onion cropping sequences for eastern U.P.
- Appropriate planting techniques for sodic soil have been developed.

The University is implementing major projects/programmes in order to facilitate strong linkages with the farmers directly and also through various line departments and agencies involved in transfer of technology task.

- KVKs, KGKs and other research and seed production centers of the University organize programmes regularly involving farmers of the area. The organization of trainings, field demonstrations, adaptive trials, goshies, diagnostic visits, surveys, personal calls by the farmers, etc. are the inherent and inbuilt mechanism of the system to receive feedback about the performance of the recommended technologies and the new problems as perceived by the farmers.

- The University supported farmers' organization "Narendra Dev Krishak Samiti", is conducting farmers-scientists interaction programme regularly in different districts. The Samiti facilitates the discussion between the University scientists and the farmers every month on fixed dates. This provides an opportunity to obtain the responses from different parts of the area jurisdiction of the University.

- The University is facilitating development of strategic research and extension plan (SREP) of the districts through PRA methods. The SREPs prepared contain the background information of the district, institutional arrangement in the district, status of natural resource management, analysis of existing farming system, agro-ecological situation wise problems, SWOT analysis, technology gap analysis, extension research strategy and action plans. The information available as detailed above provides an opportunity to the scientists and extension education units to conduct their programmes as per location specific demands.

EXTENSION



Farmers' Advisory & Technology dissemination

University is serving through Farm Advisory, Information and communication Services, Training and Agricultural Technology Information Centre (ATIC). During the year 2019-2020 total 2242 farmers were benefitted through call center; 883 through visits and 1777 mini-kits were provided to farmers. A total of 800 farmers were benefitted through technical bulletins and diaries.

On Farm Testing

Keeping in view the local need of farmers and prevailing problems and practices of the areas, 126 numbers of OFT (on farm trials) were conducted on 666 farmers' field by all KVKs. Out of which 90 on crops, 14 on live stock management and 22 on other various enterprises were assessed and provided the recommendations after assessment and refinement of the technologies in participatory mode.

Front Line Demonstrations

Front line demonstrations on frontier technologies have been done on large scale on:

- Newly released varieties of different crops
- Establishment of rice methods SRI, Drum Seeding and DSR
- Use of bio fertilizers and bio pesticides
- Resource Conservation Technology
- Precision agriculture
- Integrated fish farming
- Live stock production & management

In order to provide wider adoption, demonstrations were carried out on farmers' field in different crops/ enterprises as per the above thrust areas of the KVKs. Total 1125.60 ha demonstrations were conducted; out of which, oilseeds 223.00 ha, pulses 402.80 ha, cereals and other enterprises 499.80 ha areas were included under demonstrations of different crops benefitting 3778 farmers / beneficiaries. During the reporting year, 188 demonstrations were also conducted on Livestock and fisheries enterprises.

Farmers' Trainings

KVKs of the University conducted 1957 courses for farmers and farm women, 343 courses for rural youth, 183 courses for extension functionaries, 87 courses for sponsored trainings and 157 courses for vocational training with beneficiaries 45101, 9619, 4534, 5593, 3388 respectively.

CONTENTS

S.No.	Particulars	Page No.
1	INTRODUCTION	1
2.	UNIVERSITY ADMINISTRATION	3
	University Authorities	
	Board of Management	
	Academic Council	
	Officers of University	
	Other committees/ cells	
	Nodal Cell, ICAR	
	IAEC	
	Meetings of Executive Bodies	
	Board of Management	
	Academic Council	
	IAEC	
	Finance Sub Committee	
	Faculty Profile	
3.	TEACHING	8
	Education	
	Colleges	
	College of Agriculture Main Campus	
	College of Agriculture Kotwa Azamgarh	
	College of Veterinary Sc. & A. H.	
	College of Horticulture & Forestry	
	College Fisheries	
	College of Community Science	
	MCAET, Akbarpur	
	Linkages with International & National Institutes	
	Students Profile	
	Academic Excellence	
	Students Amenities	
	Placement	
	Students Activities	
4	RESEARCH	34
5	EXTENSION	56
6	FINANCE	70
7	HONOURS & ACCOLADES	71
8	PUBLICATIONS	75



INTRODUCTION

The Acharya Narendra Deva University is an agrarian pilgrimage of peasantry of eastern Uttar Pradesh that has mandate for agricultural development of 26 districts under seven divisions viz., Ayodhya, Basti, Devipatan, Gorakhpur, Azamgarh, Varanasi and Vindychal Dham, covering three agro-climatic zones viz. Eastern Plain Zone, North-Eastern plain zone and Vindhyan zone of eastern Uttar Pradesh popularly known as Purvanchal.

The University has identified several short-term and long-term goals in teaching, research and extension activities with a view to realize the mission statement. The University is guided by a Board of Management which is the apex body and is responsible for the management of the University. The Board of Faculties through Academic Council advise the Board of Management on academic matters. The Research Advisory Committee and Extension Advisory Committees advise the Board for research and extension activities, respectively.

The University has separate Directorate of Research, Directorate of Extension, seven Zonal Agricultural Research Stations, Computer Centre, Laboratories, Agricultural Research Information System (ARIS), Directorate of Placement, Agriculture Technology Information Centre (ATIC), Library, Central Instrumentation Laboratory (CIL), Playgrounds, Gymnasium, Instructional students' Farm etc., which provide enough opportunities to the students and the faculty to develop their skills.

The teaching activities of the University run in seven constituent colleges. The College of Agriculture, College of Home Science, College of Veterinary Science & Animal Husbandry, College of Fisheries, and College of Horticulture & Forestry are located at main campus at Kumarganj. One agriculture college is in Azamgarh, while the College of Agricultural

Engineering & Technology is located at Akbarpur in district Ambedkar Nagar. These colleges offer eight undergraduate programmes. Faculties of these constituent colleges take active part in teaching, research and extension activities relevant to their specialization. The constituent colleges thus strive to fulfill the goals and missions of the University.

Research activities of the University are mainly oriented to meet the goals and objectives of the University as outlined in the mandate. The Research Advisory Committee is the apex research body in the University which is responsible for formulating the medium and long-term research strategies and guidelines for carrying out research. The day-to-day management of all research work in the University is coordinated and managed by the Director of Agricultural Experiment Stations which has a competent network of technical, administrative and scientific personnel linking all teaching and research campuses. The ICAR provided research support through 19 AICRP functioning in different research station and department of the University. The University has evolved a set of definite and strict guidelines for release of technology to ensure quality, credibility and reliability of research output. All research results are discussed in the Zonal Research and Extension Advisory Committee meeting, and any technology developed is recommended for validation in farm trials and finally its inclusion in package of practices based on open peer review in the meeting. The most satisfying research accomplishments of the University have been found in the area of varietal improvement of various crops. The University has developed 184 varieties of different crops and several production technologies particularly in the area of cultural practices under irrigated as well as dry land agriculture, water management and pest and

disease management etc. in food crops, vegetable crops, horticultural crops, fibre crops and medicinal & aromatic plants etc. The crop production practices developed by the University have helped to increase productivity and reduce the cost of production. Breeding for pest and disease resistance in pulses; research in rain fed agriculture; improved crop production technology; mechanization for small farms and conservation of germplasm, genetic resources and biodiversity are some of the areas of current focus in research.

Extension is an important activity for the transfer of technology. While, the State

Department of Agriculture has the major responsibility of extension, however, University has often played the lead role in transfer of technology. Training for extension functionaries, rural women and farm youth has been a major programme of the extension directorate. The University has also established an Agriculture Technology Information Centre (ATIC) and Krishak Help Line Service. The information provided by the University is valuable for the stakeholders of the agriculture sector of the state.



Agriculturally Prosperous and Nutritionally Secure Eastern Uttar Pradesh



To Provide Education, Research & Extension Services in different Branches of Agriculture and other Allied Sciences to Farming Community for their Nutritional Security and Prosperous Livelihood of Uttar Pradesh in General and Eastern Uttar Pradesh in particular

GOALS & OBJECTIVES

- ◆ To produce professionals for management of second green revolution
- ◆ To accelerate the pace of enhancing rural income and employment through development of agriculture & allied fields.
- ◆ To consolidate the efforts for input and time efficient as well as cost effective technologies, processes & varieties.
- ◆ To monitor & review the agriculture development program for sustainable agricultural growth.



UNIVERSITY ADMINISTRATION

A. UNIVERSITY AUTHORITIES

The Uttar Pradesh (Krishi Evam Prodyogic Vishwavidyalaya Adhiniyam) 1958 (U.P. Act XLV of 1958 2A ii as amended Uttar Pradesh Krishi Vishwa Vidyalaya Adhiniyam, 1958 vests powers with the University to institute degrees, diplomas and other academic distinctions.

The University is empowered to award fellowships, scholarships, medals, and prizes besides conferring honorary degrees or other distinctions. The University is also authorized to make provision for research and dissemination of the findings of research and technical information through extension education

programme.

BOARD OF MANAGEMENT

Arrangements for the internal governance of the University provide for a Chancellor as Honorary Chairman, the Vice Chancellor as Executive Head and a Board of Management (15 members) including both official and non-official, which is an apex body endowed with the responsibility of taking policy decisions. The Governor of the State is the Chancellor of the University. The Vice Chancellor of the University is the Chairman of the Board of Management and Comptroller is the Secretary of this apex body.

BOARD OF MANAGEMENT (During 01-04-2019 to 31-03-2020)

S.N.	Name	Address	Duration
1.	Dr. J. S. Sandhu Vice-Chancellor, Chairman	A.N.D.U.A.T., Kumarganj, Ayodhya	01-04-2019 to 26-09-2019
2.	Dr. Bijendra Singh Vice-Chancellor, Chairman	A.N.D.U.A.T., Kumarganj, Ayodhya	27-09-2019 to 31-03-2020
Members			
3.	Principal Secretary Agric. Education & Research	Govt. of U.P., Secretariat, Lucknow	01-04-2019 to to 31-03-2020
4.	Principal Secretary Higher Education	Govt. of U.P., Secretariat, Lucknow	01-04-2019 to to 31-03-2020
5.	Principal Secretary Finance	Govt. of U.P., Secretariat, Lucknow	01-04-2019 to to 31-03-2020
6.	Director Animal Husbandry (U.P.)	Directorate of Animal Husbandry (In front of Ramadhin Singh Inter College,	01-04-2019 to to 31-03-2020
7.	Director Agriculture (U.P.)	Directorate of Agriculture, Krishi Bhawan, Lucknow	01-04-2019 to to 31-03-2020
8.	Dr. A.D. Pathak ICAR Nominee	Indian Institute of Sugarcane Research Raibareli Road, Dilkusha, Lucknow	01-04-2019 to to 31-03-2020
9.	Dr. Uma Shanker Singh Director Agriculture Scientist	South Asia Regional Coordinator & India Country Head International Potato Research Center South Asia Center, NASC Complex, DPS Marg Pusa New	01-04-2019 to to 31-03-2020
10.	Dr. Satish Chandra Dwivedi MLA	Village-Shanichara, Post-Bargadaa, Khakhari, Siddarthnagar-22	01-04-2019 to to 31-03-2020
11.	Sri Baba Gorakhnath MLA	Village-Baddai ka Purwa, Sahadatgang, Civil Lines, Ayodhya-224001	01-04-2019 to to 31-03-2020

12.	Sri Dhruv Kumar Tripathi MLC	House No. 19A Mathura Nagar (Tetri Khurd), Ward No. 7, Nagar Panchayat, Uska Bazar, Siddhartnagar	01-04-2019 to to 29-12-2019
13.	Sri Chhedi Singh Progressive Farmer	Village & Post-Gangauli Distt. Faizabad	01-04-2019 to 05-10-2019
14.	Sri Shivjeet Yadav Livestock Breeder	Village-Ram Nagar, Post-Rithi Sikrara, Distt. – Jaunpur	01-04-2019 to 05-10-2019
15.	Smt. Suchita Tewari Famous Industrialist	Krishna Nagar, Village & Post– Janaura, Distt. Faizabad	01-04-2019 to 05-10-2019
16.	Smt. Munni Sharma Ladies Social Worker	Vill. Bisunpura, Po. Baliywan Distt. Deoria 274405	01-04-2019 to to 31-03-2020
17.	Sri Lal Pratap Singh, Comptroller	A.N.D.U.A.T., Kumarganj, Ayodhya	01-04-2019 to to 31-10-2019
18.	Sri Neeraj Srivastava, Comptroller	A.N.D.U.A.T., Kumarganj, Ayodhya	19-11-2019 to 31-03-2020

ACADEMIC COUNCIL

Academic Council of the University advise on academic matters. In academic administration of the University, the Vice Chancellor seeks guidance of the Academic Council and Faculty Boards. The Vice Chancellor is the Principal Executive and Academic Head of the University. The chief administrative assistants of the Vice Chancellor are the Registrar for

academic and administrative affairs, the Comptroller for financial management through a sub-committee on financial affairs and the Dean Students Welfare for all matters relating to students' welfare. The supreme academic authority is the Academic Council of which the Registrar is the Secretary.

S.No.	Name	Designation	Chairman/ Member
1	Dr. Bijendra Singh	Vice-Chancellor	Chairman
2	Dr. R.D.S. Yadav	Prof. & Head, G.P.B.	Member
3	Dr. V.N. Rai	Dean, College of Agriculture	Member
4	Dr. Gajendra Singh	Director Research	Member
5	Dr. O.P. Rao	Dean, College of Hort. & Forestry	Member
6	Dr. R. K. Joshi	DAM / Prof. & Head	Member
7	Dr. D. Niyogi	Prof. Vety. Pathology/DSW	Member
8	Dr. Rajat Kr. Mehta	Dean, MCAET, Ambedkar Nagar	Member
9	Dr. D. K. Dwivedi	Dean, College of Home Sc./HOD Biotech	Member
10	Dr. A. P. Rao	Director Extension	Member
11	Dr. P. S. Parmanik	Prof. & Head, LPM/ Dean, Fisheries	Member
13	Dr. R. K. Doharey	Prof. Ext. Education & Assoc. Dean, College of Azamgarh	Member
14	Dr. Prakash Singh	Prof. Head, Ext. Education	Member
15	Dr. G. P. Singh	Prof. & Head, Agril. Eco.	Member
16	Dr. Rudra Pratap Singh	Prof. & Head, Bio-Chemistry	Member
17	Dr. Ved Prakash	Prof. & Head, Soil Science	Member
18	Dr. R.R. Singh,	Prof. Directorate of Extension	Member



19	Dr. Pratibha Singh	Prof., Bio-Chemistry	Member
20	Dr. M. P Chauhan	Prof., G. P. B.	Member
21	Dr. Susheel Kumar	Head, Plant Pathology	Member
22	Dr. A. K. Singh	Head, Crop Physiology	Member
23	Dr. Sita Ram Mishra	Head, Agro-Meteorology	Member
24	Dr. V. K. Singh	Prof., Vet. & A.H.	Member
25	Dr. Namita Joshi	Prof. & Head, VPE	Member
26	Dr. Anil Kumar Gangwar	Prof. & Head, Vety. Surgery	Member
27	Dr. Shushant Srivastava	Prof. & Head, VGO	Member
28	Dr. Subodh Kumar	Prof. & Head, T.L.F.	Member
29	Dr. Chandra Shekhar	Prof., VPE	Member
30	Dr. Vijay Kumar Singh	Prof. & Head, ANN	Member
31	Dr. R. K. Singh	Head, Vety. Extension	Member
32	Dr. Sonu Jaiswal	Head, Vety. Clinical Complex	Member
33	Dr. Amit Singh	Head, Parasitology	Member
34	Dr. Sanjay Pathak	Prof. & Head, PHT	Member
35	Dr. Bhagwan Deen	Prof. & Head, Post Harvest	Member
36	Dr. D. Ram	Prof. & Head, Medicinal Plants	Member
37	Dr. Arun Kr. Singh	HOD, Floriculture & Land Scene	Member
38	Dr. V.B. Singh	Head, Vegetable Science	Member
39	Dr. Suman Prasad Maurya	Head, Human Dev. & Family Studies	Member
40	Dr. Abha Singh	Head, Family Res. Manag & Consumer Sc.	Member
41	Dr. Sadhana Singh	Head, Food Science and Nutrition	Member
42	Dr. Harish Chandra Singh	Prof., Agricultural Engineering	Member
44	Dr. R. P. Singh	BOFA, Secretary	Member
45	Dr. Ashok Kumar	BOFH Secretary	Member
46	Dr. P.K. Singh	Registrar	Member/ Secretary
47	Dr. N. B. Singh	Dean PGS	Member
48	Dr. H. N. Singh	Dean Vet. & Fisheries.	Member

BOARD OF FACULTIES

The next academic authority is the Board of Studies, which is separate for each college. The Dean is the Chairman and all heads of Departments are the members of Board of Studies for any particular College. The teaching

programmes of the faculties and post graduate studies run under supervision of respective Deans who are supported by Heads of the Departments of various disciplines who look after the teaching and research activities of their disciplines.

OFFICERS OF THE UNIVERSITY

S.No.	Name	Designation
1	Dr. Bijendra Singh	Vice-Chancellor
2	Dr. P. K. Singh	Registrar
3	Dr. R. K. Joshi	Director, Administration and Monitoring
4	Dr. Gajendra Singh	Director of Agriculture Experiment Station
5	Dr. A.P. Rao	Director Extension
6	Dr.D. Niyogi	Dean, Student's Welfare
7	Sri Neeraj Srivastava	Comptroller
8	Dr. V. N. Rai	Dean, College of Agriculture
9	Dr. Sushil Kumar	Associate Dean, College of Agriculture, Main Campus
10	Dr. R. K. Doharey	Associate Dean, College of Agriculture Azamgarh
11	Dr. H. N. Singh	Dean, College of Veterinary Science and A.H.
12	Dr. O. P. Rao	Dean, College of Horticulture & Forestry
13	Dr. H. N. Singh	Dean, College of Fisheries
14	Dr. R.K. Mehta	Dean, MCAET, Ambedkar Nagar
15	Dr. D. K. Dwivedi	Dean, College of Home Science

OTHER COMMITTEES/ CELLS**NODAL CELL (ICAR):**

The University has a nodal cell for communication to education division of ICAR for

various students related activities and issues under the guidance of ICAR.

S.No.	Name	Designation
1	Dr. R. K. Joshi	Nodal Officer
2	Dr. S. K. Maurya	Asstt. Nodal Officer

INSTITUTIONAL ANIMAL ETHICS COMMITTEE:

For the smooth conducting of research on animals, University got itself registered to

CPCSEA for the purpose of experiment on small and large animals in March 2019.

Members of the IAEC

Internal Members (Within University)		
1	Dr. V. K. Singh	Chairman
2	Dr. S. K. Maurya	Member Secretary
3	Dr. Rishikant, In-charge, Animal House	Member
4	Dr. Sushant Srivastava	Member
5	Dr. A. K. Gangwar	Member
CPCSEA Nominees		
1	Dr. D. S. Upadhyay CSIR – Central Drug Research Institute, Lucknow	Main Nominee
2	Dr. Atul Kumar Baranwal Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow	Link Nominee
3	Dr. Mahadeo Kumar CSIR – Indian Institute of Toxicology Research, Lucknow	Scientist from outside of the Institute
4	Dr. Alok Kumar Shukla Amity Institute of Pharmacy, Amity University, Uttar Pradesh, Lucknow	Socially aware Nominee



**MEETINGS OF EXECUTIVE BODIES:
BOARD OF MANAGEMENT**

S.No.	Number of BOM Meeting	Date
1	185 th meeting of BOM	28.06.2019
2	186 th meeting of BOM	30.07.2019

ACADEMIC COUNCIL

S.No.	Number of A.C. Meeting	Date
1	Academic Council Meeting 266 th	25.05.2019
2	Academic Council Meeting 267 th	17.06.2019
3	Academic Council Meeting 268 th	27.07.2019
4	Academic Council Meeting 269 th	26.08.2019
5	Academic Council Meeting 270 th	09.09.2019
6	Academic Council Meeting 271 th	19.09.2019
7	Academic Council Meeting 272 th	06.11.2019
8	Academic Council Meeting 273 th	20.12.2019
9	Academic Council Meeting 274 th	16.01.2020
10	Academic Council Meeting 275 th	20.01.2020
11	Academic Council Meeting 276 th	14.02.2020

INSTITUTIONAL ANIMAL ETHICS COMMITTEE

S.No.	Meeting Number	Date	No. of proposals
1	First meeting of IAEC	April, 10 th , 2019	18
2	Second meeting of IAEC	January, 10 th , 2020	21

FINANCE SUB COMMITTEE

S.No.	Number of Meeting	Date
1	100 th meeting of finance sub committee	28.06.2019

FACULTY PROFILE

Presently, total faculty strength in the constituent colleges / KVKs, research centres and AICRP of the university is 264. 110 faculty

members are in the teaching schemes, 40 in the research projects and 114 at different KVKs in extension.

Units	Sanctioned	In position
Colleges	290	110
Research Center	44	11
AICRPs	55	29
KVKs	216	114
Total	605	264

TEACHING

EDUCATION

The University offers master degree programme in 33 disciplines and Ph.D. programme in 16 disciplines. Since its inception, the University has produced graduates over 1535 in Agriculture, 554 in Home Science, 389 in Veterinary, 145 in Horticulture, 106 in Fisheries and 683 in Agricultural Engineering and post graduates 2010 in various disciplines of Agriculture, 81 in Veterinary and 31 in Home Science as well as 548 PhDs in various disciplines of Agriculture. The post-graduate students are also

required to register some advanced courses. Many departments have shown creditable performance in teaching and research.

COLLEGES

The various colleges and research stations of the university are having adequate land for research and office buildings at their campuses. The laboratory facilities and classroom spaces are adequate for UG and PG teaching. Sufficient hostel facilities are available to the students at University campus.

DIFFERENT COLLEGES OF THE UNIVERSITY

S.No.	College	Location
1	College of Agriculture	Main Campus, Kumarganj
2	College of Agriculture	Kotwa, Azamgarh
3	College of Veterinary Science & Animal Husbandry	Main Campus, Kumarganj
4	College of Horticulture & Forestry	Main Campus, Kumarganj
5	College of Fisheries	Main Campus, Kumarganj
6	College of Community Science	Main Campus, Kumarganj
7	Mahamaya College of Agriculture Engineering & Technology	Akbarpur, Ambedkar Nagar

COLLEGE OF AGRICULTURE, MAIN CAMPUS



This college is the oldest one and established in the main campus which provides education & expertise in the field of agriculture to the 26 districts belonging to seven revenue

divisions. There are 13 departments in the Faculty of Agriculture.

The main building consists of four wings including 13 separate departments and six lecture rooms and one auditorium. Besides, four new lecture halls were built with recent infrastructure facilities of sound system and multimedia. Faculty of colleges takes active part in teaching, research and extension activities relevant to their specialization. The constituent colleges thus strive to fulfill the goals and missions of the University.

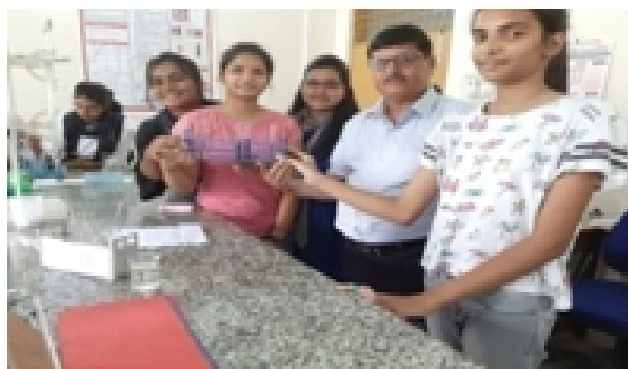
For academics, the recommendation of 5th



Dean's Committee is being followed in the University. Presently, twelve departments and one section viz; Agronomy, Plant Molecular Biology and Genetic Engineering, Crop Physiology, Entomology, Agriculture Biochemistry, Extension Education, Genetics and Plant Breeding, Agricultural Meteorology, Plant pathology, Soil Science and Agricultural Chemistry, Agricultural Statistics and Agricultural Economics and section of Seed Science & Technology are functioning in college of agriculture.

The College has one students Instructional Farm of 30 acres land with all required facilities for conducting the Practical Crop Production (PCP) course and research experiments of M. Sc. (Ag.) and Ph. D. students. Besides, the research farms of department of Genetics & Plant Breeding, Agronomy and Main Experiment Station (MES) are also used for facilitating instruction and research of the students.

Each department of the college has well equipped and organized two under-graduate and one or more post-graduate laboratories along with two P.G. lecture rooms and one seminar room with audio-visual facilities for serving the students,. There are ten U. G. lecture rooms/ Examination halls and seven smart class rooms in the college.



B.Sc. (Hons.) Ag. Practical Classes

Post-Graduate and Ph.D. programme:

The students admitted in PG and Ph.D. programme in different departments viz- Agronomy (23 & 06), GPB (17 & 09), Soil Science (12 & 04), Agril. Economics (08 & 05), Extension Education (10 & 03), Agril. Statistics (01 & 01), Crop Physiology (06 & 03), Plant Pathology (17 & 03), Entomology (12, 03), Agril. Bio-Chemistry (05, 00), Seed technology (04 & 02), Agril. Meteorology (05 & 02), and Agricultural Bio technology (06 & 05), respectively.

New Developments during the year:

During the year 2019-20, two new central laboratories and two new smart class rooms were developed for proper teaching facilities of students. A Mushroom Cultivation Unit was also established.

The **Personality Development Cell** was established for conducting the personality development programme for students by the faculty members and the NGO Medha Learning Foundation.

The **College Museum** was established for strengthening and demonstration of agricultural commodities like seeds, fertilizers, diseases & insects samples, Agro-chemicals and other materials of academic interest.



Smart Class Room Teaching

- The **Cultural Cell** of the college has been established for organizing cultural and other extra co-curricular activities.

- Committee for **Prevention of Sexual Harassment of Women** at work places was constituted in the college.

- **Anti-ragging Cell** of the College was setup.

- The **Logistic Room** with common facilities for providing computer, printer, photocopier with internet availability was established for fulfilling needs of every one in the college.

- Advanced Computer Training was organized to update the technical knowledge of College staff.

- Agro-Meteorology department of the college has LED to install and run the **Digital**

Weather Data Display Board in the campus to update weather forecasting.

- Two **Buffaloes** were purchased to invigorate the Integrated Farming Model running at the research farm of Department of Agronomy.

- **Rain Water Harvesting Pond** was developed under AICRP-Dry Land Agriculture at the research farm of Department of Agronomy.

- **Fencing of Agronomy and Instructional Farms** of the College was accomplished by using barbed iron wire to check the menace of blue bulls and stray cattles.

- A training camp through NAHEP was organized from 20th to 21st February, 2020 to 25 students on mushroom productions technique for imparting employment-oriented education to students of college.



Inauguration of Mushroom Cultivation Unit



Visit of Peer Review Team of NAEAB ICAR



Various Students Activities



Various Students Activities



COLLEGE OF AGRICULTURE, KOTWA, AZAMGARH



College of Agriculture Campus, Kotwa, Azamgarh has following sections:

1. Agronomy
2. Soil Science
3. Genetics and Plant Breeding
4. Horticulture
5. Entomology
6. Plant Pathology
7. Forestry
8. Crop Physiology
9. Microbiology
10. Agricultural Extension Education
11. Agricultural Economics
12. Agricultural Engineering
13. Statistics and Mathematics

Admission

The college admits the total numbers of 60 students for the course B.Sc. (Ag.) Hons. All students are selected by the Uttar Pradesh Combined Agriculture and Technology Entrance Test (UPCATET) examination which is conducted rotationwise the four Agricultural Universities of Uttar Pradesh.

At present, there are 161 students studying their UG programme. Presently PG and Ph.D. programmes are not started.

Orientation of freshers

Newly admitted students were well oriented with rules, regulation and manner of the college/ University.



Practical crop production (PCP) work done by the B.Sc. (Ag) 3rd year students

B.Sc. (Ag) 3rd year students are doing practical work on the farm and transplanted Paddy in PCP.



COLLEGE OF VETERINARY SCIENCE & ANIMAL HUSBANDRY



The College of Veterinary Science and Animal Husbandry is working for the betterment of livestock sector by providing quality teaching and by disseminating latest technologies and developments in its field. There are 17 departments namely - Animal Genetics and Breeding, Animal Nutrition, Instructional Livestock Farm Centre, Livestock Production and Management, Livestock Products and Technology, Teaching Veterinary Clinical Complex, Veterinary & Animal Husbandry Extension, Veterinary Anatomy and Histology, Veterinary Gynecology & Obstetrics, Veterinary Medicine, Veterinary Microbiology, Veterinary Parasitology, Veterinary Pathology, Veterinary Pharmacology & Toxicology, Veterinary Physiology & Biochemistry, Veterinary Public Health and Epidemiology and Veterinary Surgery and Radiology.

The college follows norms of Veterinary Council of India for its UG teaching program and for PG & PhD, ICAR norms are followed.



Students at Clinic



First Meeting of IAEC

Students have taken admission from the UPCATET-2019 conducted by our university and Veterinary Council of India. A total of 83 students comprising of 56 in B.V.Sc. & A.H., 23 in M.V.Sc. and 04 in PhD got themselves registered in the Veterinary College in the academic session 2019-20.

New Developments during the year:

During the year 2019-20, central laboratories and one new smart class rooms were developed for proper teaching facilities of students.

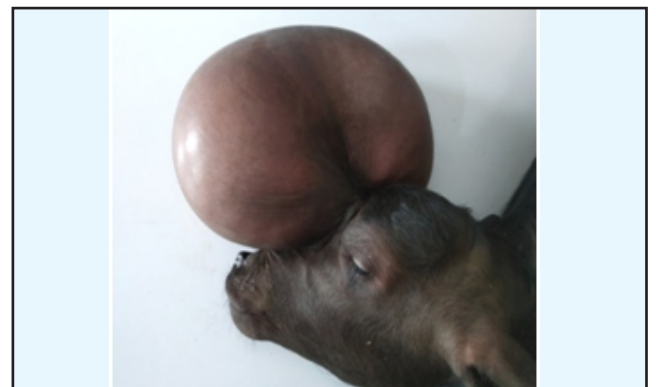
- The final year students of College of Veterinary Science and Animal Husbandry undergo rotational six months internship programme of six months duration, which offers exposure to practical aspects in a concise manner.

Institutional Animal Ethics Committee:

Two Meetings of Institutional Animal Ethics Committee were held on April 10, 2019 and Jan 10, 2020.

Clinical activities: Number of clinical cases attended in 2019-20

- Gynaecology: 188
- Medicine: 925
- Surgery: 532
- Total: 1645
- Levy deposited: Rs. 98195.00



Cerebral Meningocele in calf: Before surgery



- In Academic session 2019-20, 33 students got themselves enrolled in Internship Program. Out of 15 students who completed their B.V.Sc. degree in 2019, 05 qualified the JRF examination conducted by ICAR, 03 students took admission at NDRI Karnal, GADVASU Ludhiana and NDVSU, Mhow, Jabalpur. One of the MVSc student got admission in NDRI, Karnal for PhD Program.

- The college is continuously organizing **student corporate interaction programs**.

- To address the problem of drug resistance, the college has been conducting research on establishing database of **antimicrobial resistance pattern of Eastern Uttar Pradesh** especially Methicillin resistance *Staph aureus*, Extended spectrum β lactamase and Cabapenamase producing Enterobacteria which are the priority agents as per WHO.



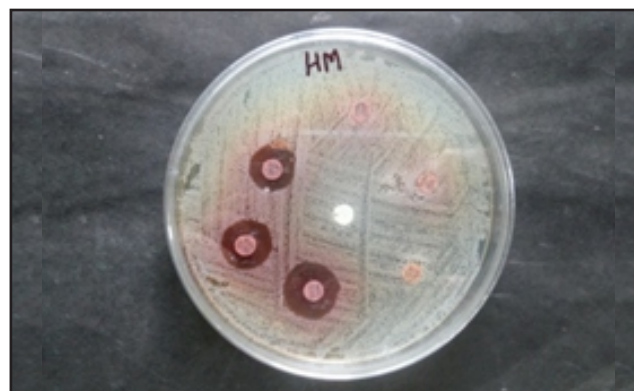
MIC Determination by E strip

- College is also working on establishing the prevalence of major animal parasites and following prevalence of has been recorded in Ayodhya district.

- The college has been promoting the

Animals	Parasites	Incidence
Bovines	Theileriosis	23.65%
	Trypanosomosis	2.63%
	Amphistomosis	10%
Sheep and Goat	Haemonchosis	54.00%
	Amphistomosis	10%
Equines	<i>Theileria equi</i>	14.00%
	Microfilariae	6.25%

research on locally abundant medicinal plants and their products namely Aonla, Moringa, Neem, Guava etc. against common parasitic diseases and mastitis. In vitro efficacy of these plants is being established against common pathogens of mastitis.



In vitro efficacy of *Moringa oleifera* against *S. aureus*

- A new **integrated farming model** has been developed (**NSP6**) by reclamation of 6.1 hectare wasteland (userbhumi) for fodder cultivation, fish farming and horticulture crops and planning to develop goat farm.

- Research is being carried to develop Non-antibiotic phytogetic feed additive in poultry farming.

- Department of Animal Nutrition is establishing State of Art Feed analysis laboratory under RKVY.

- Incidence of common diseases causing mortality in poultry in Eastern Uttar Pradesh has been studied to establish the package of practices to be followed for profitable poultry farming.

COLLEGE OF HORTICULTURE & FORESTRY

The College of Horticulture and Forestry (CHF) is located in main campus of A.N.D.U.A.T., Kumarganj, Ayodhya (U.P.). The geographical area under the jurisdiction of the college is spread over in three zones namely, North Eastern Plain Zone, Eastern Plain Zone and Vindhyan Zone comprising 26 districts of Uttar Pradesh and extension programmes.

Initially, the department of Horticulture was initiated in the year 1977 and the work on Horticultural crops was started at the Crop Research Station, Masodha and afterwards shifted to the main campus of the University at Kumarganj. At the beginning all the branches viz., Fruit Science, Vegetable Science, Ornamental Horticulture and Post-Harvest Technology were included in the Department of Horticulture. Later on, in the year 1980 a separate department of Vegetable Science was established. The post graduate programmes were started in the year 1981 in College of Agriculture in disciplines of Horticulture and Vegetable Science. The department of Forestry was established in the academic year 1987-88, which was divided into two departments namely; (i) Department of Agro forestry and (ii) Department of Forest Ecology and Environment with the establishment of College. The College of Horticulture and Forestry was established in 2006 with seven departments; (i) Fruit Science, (ii) Floriculture and Landscaping (iii) Post-harvest Technology (iv) Vegetable Science (v) Medicinal and Aromatic Plants (vi) Agroforestry (vi) Forest Ecology and Environment.

The post graduate degree was started in discipline of Agro forestry and Forest Ecology & Environment in the year of 2009 and 2010, respectively. The new building of College of Horticulture and Forestry was constructed in the university campus in 2009 which was inaugurated by Hon'ble Vice-Chancellor Dr. Basant Ram on

11-12-2009. Apart from B.Sc. (Horticulture), the college operates M.Sc. & Ph.D. programs in Horticulture, Vegetable Science and Agroforestry.

Developments during the year:

During the Year 2019-20, one Central Instrumentation Lab. Facility was developed for smoothly conducting the research activities & P.G. & Ph.D Students.

- One New Smart Classroom was developed for advanced teaching of students.
- All U.G. & P.G. Classrooms of the college were upgraded to Smart Classrooms for facilitating teaching activities.
- The smart classrooms have been developed in class rooms of U.G. & P.G. students.

Experiential Learning Programme (ELP):

In the session 2019-2020, 37 students of B. Sc. (Horticulture) final year were registered for ELP. Out of 37 registered students, 36 were approved for degree. In the ELP, students were involved in commercial Horticulture and processing of fruits and vegetables. The programme was undertaken as nursery management of fruits, vegetables and flowers concerning to their raising techniques, management and marketing. Under processing of fruits and vegetables, students learned practical processing technology of various fruits like mango, bael, ber, jackfruit, karonda etc. and vegetables like pea, cabbage, carrot, cauliflower etc. They prepare processed products like jam, jally, murabba, osmodehydrated / products, squash, syrup, RTS etc. under this program.

Rural Horticulture Work Experience (RHWE):

RHWE programme was organized for B.Sc. (Horticulture) final year students. 37 students were registered for placement in village



Tendha, Tahsil-Milkipur, District-Ayodhya. They worked with the villagers to develop their skill in various activities of horticultural crops production technologies. Same students were also placed in various horti based industries located nearby Chilibila, District-Pratapgarh (U.P.). In these placements, students were exposed to learn through doing and involved in processing of various fruits and vegetables and developed

managerial skill capacity. 36 students were passed out in both the programmes. Students completed their entire programme before lockdown in village Tendha.

- One AICRP on spices got best AICRP Award from ICAR



Hon'ble Minister Agriculture Sri Surya Pratap Shahi planted Mango plants at MES Horticulture Farm



Receiving best Centre Award 2018-2019 of AICRP on Spices at TNAU, Coimbatore



Hon'ble Minister Agriculture at MES Horticulture Farm



Accreditation Team at MES Horticulture Farm



Distribution of tree to the farmers



Students participated in Capacity Building Programme

COLLEGE OF FISHERIES



The College of Fisheries was started in year 2006-07 with financial assistance of State Government of Uttar Pradesh and Indian Council of Agriculture Research, New Delhi. At present, this College offers Bachelor of Fisheries Science (B.F.Sc. Hons.) and in year 2019, M.F.Sc. started in two departments, Department of Aquaculture and Fisheries Resource Management with 2-2 seats in each department. The students are admitted through Combined Agriculture and Technology Entrance Test (CATET). The qualification for admission in this programme is 10+2 in Science-Biology/Agriculture for 25 seats of B.F.Sc. and B.F.Sc. is basic qualification for admission in M.F.Sc. degree programme. The recommendations of Vth Dean's Committee of ICAR are being followed from session 2016-17.

At present following seven Departments exist in the college.

Sl. No.	Department
1	Aquaculture
2	Fisheries Resource Management
3	Aquatic Animal Health Management
4	Aquatic Environment Management
5	Fish Processing Technology
6	Fisheries Engineering
7	Fisheries Extension, Economics and Statistics
Total	Seven

Developments during the year:

- **Teaching**

The teaching work of B.F.Sc. (17) & M.F.Sc. students were conducted properly. The students were involve in theoretical and practical classes.

- **Infrastructure:**

The College building has four UG class rooms and seven PG class rooms, two central laboratories, 6 research labs and 2 wet labs. Recently two laboratories have been upgraded and equipped with chemicals and equipments. The College is also equipped with a library containing books, magazines and manuals.



View of Classroom

Instructional fish farm facilities:

A total of 30 ha water area is under Instructional fish farm. Total ponds existing are 17. At instructional fish farm one earthen pond has also been constructed to store the waste water from hostels and dairy farm which is being reused for fish culture. Four newly renovated ponds have been stocked for practical fish culture operation. These fishes of fish farm are being used for different practical and fish breeding programme purposes for students. Rest of fish are available for selling time to time.

Student Ready Programme:

In Student Ready Programme (SRP), the students were attached to various aquaculture farms, seed production units, feed processing and



fish processing industries in various states like Maharashtra, Gujarat, Haryana and Madhya Pradesh to learn the intricacies of Industries. The students gain practical experience and become more confident in the concerned field of training.

After industry attachment programme, students remain engaged in rural fisheries work experience programme for better extension exposure of fish culture. Under the FHOT programme, group of students were allotted pond at the instructional fish farm.



Students under Hands-on-Training Programme

Students Development:

Since the new students take admission in University, they are introduced to various rules and regulations and semester system through orientation programme. The students are also advised to participate in social, cultural, extra-curricular and sports activities during their studies. In brief these activities are as follows:

Involvement in Social Programme:

The students are actively involved in following social programmes.

1. Exhibition to create the awareness about modern fishery technologies.
2. Group discussion on various social and current issues of national awareness.
3. General cleaning in and around college and public places under Swachh Bharat Abhiyan.

COLLEGE OF COMMUNITY SCIENCE



Community science is an applied and professional discipline that prepares individuals to obtain recent scientific information in both urban and rural areas. The need for Community science education in agricultural universities arose with increased demand and recognition of the role of rural women in contributing to the family economy and increasing their standard of living. It has ample scope for practical family applications and career opportunities. This has necessitated the organisation to remain aligned with changing times and to move the goals to a wider perspective than those previously conceived.

The journey of Community Science started as Department of Home Science in the premises of Agriculture College in 1986. The Department was upgraded to College in 1993 with start of degree programme B.Sc. Home Science and renamed as College of community Science in the year 2020. The college focuses on developing skills and strengths of the students based on scientific principles and knowledge acquired for day-to-day living; promotion of analytical abilities of students towards innovative research to augment the quality of life of family, community and industry in the changing scenario, enhancing entrepreneurial skills for professional careers. Since its inception in 1992, the college has made tremendous contribution in the field of teaching research and extension.

The college of Community Science offers B.Sc. Community Science (Honours); M. Sc. & Ph. D. in three subjects: Food Science and Nutrition, Human Development and Family Studies and in Family Resource Management and Consumer Science.

At present college is committed to provide education in fields of Food Science and Nutrition, Human Development and Family Studies, Family Resource Management and Consumer Science, Textiles and Apparel Designing and Extension Education & Communication Management as per the recommendation of 5th Deans Committee.

Developments during the year:

Teaching: Thirty one students of UG and 2 students of PG have received degree in community Science. Anjali Yadav, Preeti Maurya and Akanksha awarded with Chancellor's Gold Medal, Vice chancellor's Gold medal and University gold medal respectively.

Post Sanctioned: To strengthen teaching, college got sanction of 21 posts (three professors, three associate professors, fourteen assistant professors and one dean) from state government which will help to remove hurdles in the accreditation process in future.

NAAC Team Visit: The college participated in NAAC accreditation process held on 12th Feb 2020.



NAAC Team Visit

Facilities developed:

- Language Lab was established with 11 Computer sets, Software of Language and Wi-Fi Connection. The systems have Digital Language software for English learning.
- Library was digitalized with arrangement of two computer, smart board, Printer and Wi-Fi connection for Internet Facility together with Anti Virus.
- Established two Smart Class Room with Interactive board for classroom teaching.
- The college has generated e-governance facility with installation of CCTV cameras to monitor teaching and learning.

College Level Unit/Cell

College constituted various units or cells established at college level during the session 2019-20.

Units established during the session 2019-20

Committees	Chairman
Anti-ragging cell	Dr. Suman Prasad Maurya (Assoc. Prof.)
Institutional Animal Ethics committee	Dr. Sadhna Singh, (Assoc. Prof.)
Sexual harassment Cell	Dr Abha Singh, (Assoc. Prof.)
Exhibition hall/ museum	Dr. Poonam Singh , (Asst. Prof.)
Language lab in-charge	Dr. Suman Prasad Maurya (Assoc. Prof.)
NSS Unit	Dr Abha Singh, (Assoc. Prof.)
Personality development cell	Dr. Sadhna Singh , (Assoc. Prof.)
Cultural centre	Dr. Poonam Singh, (Asst. Prof.)



Projects running/sanctioned during the session 2019-20

S.No.	Title of project	Year	Funding Agency	PI / Co PI	Total Budget (Rs. in lakh)
	Ergonomic Laboratory for Ergonomic Risk Analysis and Reducing Health Hazards of Farm Women	2019-20 (Running)	RKVY	Dr Abha Singh-PI	40.35
2	Establishment of Agriculture technology park project	2019-20 (Sanctioned)	U.P.C.A.R., Lucknow	Dr. Sadhna Singh/ Co PI	492.5
3	Establishment of centre for quality testing and assurance of agricultural commodities	2019-20 (Sanctioned)	U.P.C.A.R., Lucknow	Dr. Sadhna Singh/ Co PI	375.52

MAHAMAYA COLLEGE OF AGRICULTURAL ENGINEERING & TECHNOLOGY AKBARPUR, AMBEDKAR NAGAR



The Mahamaya College of Agricultural Engineering and Technology (MCAET), Ambedkar Nagar is located about 52 km away from Faizabad on Faizabad- Akbarpur (Ambedkar Nagar) National highway (NH 30) near "Shiv Baba" a religious place. The campus comprises the college buildings, boys hostels, girls hostel, guest house and residential buildings for faculty members and supporting staff. The teaching programme is conducted in B.Tech. (Agricultural Engineering), B.Tech. (Mechanical Engineering) and B.Tech. (Computer Science & Engineering)

Developments during the year:

Orientation of freshers:

Newly admitted B.Tech. students were acquainted well with rules and regulations of the college/University just after completion of their registration in their fresher's party which was organized by senior students.

Courses offered:

Total 82 courses containing 259 credit hours were offered in 1st Semester, Session 2019-20 and 90 Courses of 302 credit hours were offered in 2nd Semester, Session 2019-20. The classes were regularly conducted as per University norms.

Engagement of Guest Faculty:

Total 14 Guest Faculty comprising three in Mechanical Engineering, three in Computer Science & Engineering, one in Electrical and Electronics Engineering, one in Chemistry, one in Mathematics, one in Civil Engineering, one in English, one in Physics and two in Agricultural Engineering were engaged for teaching in 1st Semester as well as 13 Guest Faculty were engaged in 2nd Semester, Session 2019-20. Besides, some other courses likewise Soil Science and Agronomy were taught by the faculty available from Main Campus, Kumarganj.

Convocation:

21st convocation was held on September

2004 in which total 101 students of the college were awarded degree, Branch wise degree recipients were 50 students of B.Tech. (Agricultural Engineering), 35 of B.Tech. (Mechanical Engineering) and 16 of B.Tech. (Computer Science & Engineering).

Scholarship:

The students of college avail their scholarship from Samaj Kalyan, UP Government and ICAR, New Delhi.

Hostel Accommodation:

Keeping paucity of accommodation in campus, freshly enrolled students of all streams were preferably accommodated in Boys hostel and all girl students were accommodated in Girl Hostel available in the campus.



View of Practical and Hands-on-Training



View of Practical and Hands-on-Training



Hon'ble Vice Chancellor visited at MCAET campus

LINKAGES WITH ACADEMIC INSTITUTIONS & INDUSTRIES

- IRRI, Philippines
- ICAR-CISH, Lucknow
- ICAR- NRC Litchi, Muzaffarpur
- ICAR-NBAIM, Kushmaur, Mau
- UP CST
- NBRI, Lucknow
- ICAR- NRC Equines, Hisar
- ICAR- IVRI, Izatnagar, Bareilly
- Hester Biosciences Limited, Ahmedabad
- Patanjali Bio Research Institute Private Ltd. Laksar Road Haridwar
- Indra Pesticide Limited Bareilly
- Doss Agro Science India Pvt. Ltd., Mumbai
- Medha Learning Foundation, Lucknow

Library services: College Library is well equipped with 3424 books, 05 Almirah, 39 Book Shelf National & International magazines and newspaper are also subscribed for the benefit of students.



A View of Boys and Girls Hostel at MCAET campus



STUDENTS' PROFILE

The total strength of the students on roll in the University is over seventeen hundred. Hostel facilities are provided to both boys and girls in all the teaching campuses of the University. A Dean Students' Welfare is nominated by the University to look after the interest of the students. The University provides all encouragement for sports and extra-curricular activities through several

incentives. Several students have achieved distinction in sports, games and cultural activities both at the university and state levels. The University teachers are conducting coaching classes for students appearing in ICAR fellowships and NET examination.

Student Status in University in all Constituent Colleges, Year 2019-20

S. No.	Name of College	Parameters	Numbers			
			Bachelor's	Master's	Ph.D.	Total
1	College of Agriculture	Intake (1 st Yr)	192	140	111	443
		Enrolled (1 st Yr)	192	153	61	406
2	College of Horticulture & Forestry	Intake (1 st Yr)	42	-	-	42
		Enrolled (1 st Yr)	43	-	-	43
3	College of Home Science	Intake (1 st Yr)	46	10	-	56
		Enrolled (1 st Yr)	24	2	-	26
4	College of Fisheries	Intake (1 st Yr)	26	4	-	30
		Enrolled (1 st Yr)	24	4	-	28
5	College of Veterinary Science & Animal Husbandry	Intake (1 st Yr)	51	54	47	152
		Enrolled (1 st Yr)	56	23	10	89
6	College of Agricultural Engineering & Technology	Intake (1 st Yr)	100	-	-	100
		Enrolled (1 st Yr)	33	-	-	33

Category wise number of students in the University during the year 2019-2020

No. of students in different categories							
	SC	ST	OBC	EWS	General	Foreigner	Total
Bachelor's	98	11	119	10	259	-	497
Master's	43	5	56	9	114	3	230
Ph.D.	25	2	32	3	64	1	127

Gender Pattern amongst Students Enrolled in University:

S. No.	Name of College	Sex	Numbers (including 1 st , 2 nd , 3 rd , 4 th , 5 th and 6 th year as applicable)			
			Bachelor's	Master's	Ph.D.	Total
1	College of Agriculture	Male	682	260	137	1079
		Female	42	28	18	88
		Total	724	288	155	1167
2	College of Horticulture & Forestry	Male	143	-	-	143
		Female	11	-	-	11
		Total	154	-	-	154
3	College of Home Science	Male	-	-	-	-
		Female	93	3	-	96
		Total	93	3	-	96
4	College of Fisheries	Male	82	4	-	86
		Female	8	-	-	8
		Total	90	4	-	94
5	College of Veterinary Science & Animal Husbandry	Male	131	35	9	175
		Female	30	1	1	32
		Total	161	36	10	207
6	College of Agricultural Engineering & Technology	Male	240	-	-	240
		Female	17	-	-	17
		Total	257	-	-	257

ACADEMIC EXCELLENCE

Seventy one students of different colleges of ANDUAT qualified in ICAR- JRF/ SRF and GATE examinations. The detail is given below;

S.No.	Name of College	Number of Students qualified in					
			ICAR JRF	ICAR SRF	NET	CSIR	GATE
1	Agriculture	2	15				17
2	Veterinary	15	1				16
3	Horticulture	9		13			22
4	Community Sc	6					6
5	Engineering	5			2	3	10
	Total	37	16	13	2	3	71



STUDENT AMENITIES:

The Dean Student's Welfare Office provides boarding, lodging, facilities for entertainment and sports, medical facilities and security to the all registered students. This office facilitates fee concession, fee reimbursement, scholarship/fellowship; stipends etc. to students and also play the pivotal role to maintain discipline among the students.

HOSTELS:

The students of each College are compulsory to reside in the Hostel. There are 21 hostels including three separate hostels for girls students and one for International students with separate arrangements for post-graduate and

undergraduate students in which near about 2000 students are residing.

FINANCIAL AID/SCHOLARSHIPS IN THE UNIVERSITY:

The financial assistance is available for more than 60% students. There are about 20 types of scholarships such as University financed scholarships, I.C.A.R., U.G.C., Samaj Kalyan Scholarship for Scheduled caste / Scheduled tribes, General categories, Minority and Other backward class scholarships from Govt. of U.P. and Individual Fellowships, Mandi Samiti scholarships for the students.

Details of Scholarships in the University:

S.No.	Name of Scholarships	No. of Students	Amounts	Remarks
			(Rs./ Month)	
1-	University Merit Scholarship			
a)	B. Sc. (Ag./ Home Sci./ B.V.Sc. & A.H.)	15 per cent total admitted students in a year.	150	-
b)	M. Sc. (Ag./ Home Sci./ M.V.Sc.)	01 Student in each Deptt.	500	-
c)	Ph. D.	02 Students in each Deptt.	1500	-
2-	U.G.C. Fellowship		25000 and after 02 year	Selected by U.G.C. on the basis of students application showing his Ph. D. research work.
a)	Rajeev Gandhi National Fellowship for SC/ST Ph. D. students	0 Students	28000	
b)	DST – Inspire Fellowship	02 Students old		
3-	ICAR Fellowship		12640	Selected by ICAR through entrance examination.
a)	Junior Research Fellowship	0 Student		
	M. Sc. (Ag./Home Science)			
b)	Senior Research Fellowship	0 Students		
	Ph.D.			

4-	National Talent Scholarship	0 Students	3000	-do-
	B. Sc. (Ag./ Home Sci./ Ag. Engg./ Fisheries/ Hort.)			
	M.Sc. / MVSSs.		5000	do-
5.	U.P. Mandi Parishad Scholarship for all colleges			
a)	Under Graduate	20 Students	3000	These scholarships have been given to son/daughter of Laghu Seemant Farmers and selected on the basis of intermediate/B. Sc. Level merit.
b)	Post Graduate	25 Students		
6-	U.P. Govt. Scholarships			These scholarship have been given to students those guardians income is below Rs. 2.5 lac per year SC/ST and General/ OBC 2.0 Lac. Rate of scholarship of Hostelor students is Rs. 1200/= PM and Day Scholars is Rs. 550/=PM
a)	SC/ST Category Scholarship	-	1200	
b)	General Category Scholarship	-	-do-	
c)	OBC Category Scholarship	-	-do-	
d)	Minority Category Scholarship	-	-do-	
e)	Out of country Fellowship	2 students	15000	

Hostel renovation:

Renovation of Kalindi, Varuna, Amarawati, Gombi, Niranjana, Saryu, Saraswati, Anoma and other hostels has been done. New Volley ball field and Badminton court has been inaugurated by Hon'ble Vice Chancellor.

Foreign Students:

Six students of Afghanistan are studying in the University for the M.Sc. and Ph.D. degree in the subject Agriculture Extension Education and Horticulture during the academic session 2019-20.

Physical education:

The university organized many different activities through games and sports as well as cultural, debate and social programme units like Athletics, Badminton, Basketball, Cricket, Football, Gymnastics, Hockey, Indoor games,

Kabaddi, Tennis, Kho-kho, Handball, Swimming, Table Tennis, Volley ball, Yogic exercises, cultural, art & craft, literary and communication skill events under over all supervision of University Sports Council / Dean Student's Welfare. The University provides required games and sports materials to the hostels as well as University ground. A central sports ground, adequately equipped gymnasium, physical fitness equipments and a swimming pool (under construction) exits for athletics as well as other game events.

Sports coaching facilities:

The Guest teacher has been appointed for coaching to the students. Coaching facilities are available in the University sports ground for making the students efficient in various games. The students can contact the physical education



Staff/ Presidents of various games for guidance.

Activities of Games & Sports:

The Department of Games and Sports organized the Inter College Kabaddi, Volleyball, Football, Table Tennis and Badminton Championship Tournaments.

Group Health Insurance Scheme:

This scheme is compulsory for each student in which cashless treatment facilities are available.

Student's Discipline & Hostel Regulations:

A student is expected to reflect under all the circumstances proper respect for order, morality and rights of others and such sense of personal honor as demanded by good citizens. The University reserves the right to drop any student whose conduct is deemed improper or prejudicial in good order and in interest of the University. The serious cases of indiscipline are referred to the University Discipline Committee for the punishment. Each and every students of the university shall follow the rules and regulations of the university during their study period. Under the direction of Hon'ble Vice-Chancellor, Dr. Brijendra Singh printed copies of new hostel rules and regulations has been distributed to all the Hostel Warden and Assistant Hostel Warden of different hostels and also to the students of our university prior to start of semester.

Other Activities:

- Kitchen, dining places, toilets, bath rooms and gallery of all the hostels has been repaired and renovated.
- Water Cooler with RO facilities has been provided in the rest 06 hostels where facilities were not available.
- Sufficient chairs in the dining room have been provided and all the table tops has been renovated in most of the hostels.
- Single beds in sufficient number have been provided in the girl's hostel. All the indoor and

outdoor sports facilities have been established in the girl's hostel.

- Sanitary machines for sanitary napkin disposal have been established in all the toilets of the girls' hostels.
- In all hostels, ordinary bulb has been replaced by LED bulbs and proper lighting facilities in the hostel and hostel premises have been assured. All the street lights of different hostels has been fitted with LED lights and maintained in working condition.
- Surroundings of all the hostels have been cleaned to maintain a hygienic atmosphere in the hostel.
- Forty students comprising of 27 boys and 13 girls from different colleges of our university participated in the All India Agri-Sports-2020 organized by Sri Venkateswara Veterinary University, Tirupati, Andhra Pradesh from 1st March to 04th March, 2020.

Hostels and Students Capacity:

S.No.	Hostel	Rooms	Seats
1	Ganga Hostel	108	130
2	Yamuna Hostel	104	148
3	Saryu Hostel	112	156
4	Kalindi Hostel	70	120
5	Varuna Hostel	110	130
6	Rohini Hostel	40	120
7	Hiranyawati Hostel	58	116
8	Anoma Hostel	34	102
9	Amrawati Hostel	50	100
10	Saraswati Hostel	50	120
11	Rapti Hostel	34	68
12	Gomti Girls Hostel	52	126
13	Brahmaputra Hostel	40	120
14	Niranjana Hostel	19	38
15	Gomti Girls Hostel Phase-2	20	60
16	Achirawati Hostel	22	44
17	Godawari Hostel, Ambedkarnagar	60	-
18	Kaveri Hostel, Ambedkarnagar	43	-
19	Girls Hostel, Ambedkarnagar	18	-
20	Boys Hostel Azamgarh	32	96
21	Girls Hostel, Azamgarh	20	60

PLACEMENT

Directorate of Placement is a separate wing to facilitate for employment to outgoing/passed out students of the university every year and co-ordinators from different colleges to make a linkage with the activities of placement cell.

Director	Dr. D. Niyogi
Assistant Director	Dr. Ulman Yashmita Nitin
Coordinators	
College of Agriculture	Dr. Shamboo Prasad
College of Veterinary Science	Dr. Satyavrat Singh
College of Horticulture	Dr. Sanjay Pathak
College of Fisheries	Dr. Dinesh

- The main endeavour of the Placement Cell of the university is to get the students placed in reputed multinationals, government organizations, NGO's and the Private Sectors by coordinating between the students and different private organizations. The directorate is committed to provide all possible assistance to its students in their efforts to find employment.

- The mission is to train the students on industry needs and provide the best of opportunities available in India and abroad for the university students.

- The goal therefore is to provide career guidance and 100% placement opportunities to our students working on their weakness, imbibing confidence and giving a perfect shape or start to the budding technocrats in their respective fields.

- It acts as an interface between the industry and the students and primarily enables the students to select from their career options.



- In addition, the placement cell strives to guide the students to hone the skills of the students in order to cater the needs and expectations of the competitive job world.

- Students are also sensitized by providing platforms and tools for online delivery, classroom managements and career orientation programme.

- The University has been imparting job oriented professional education in different field's viz. Agriculture, Horticulture, Veterinary Science & Animal Husbandry, Home Science, Agricultural Engineering, Computer Science, Biotechnology and Fisheries. The placement cell provides a platform to students and recruiters to come together and explore mutual interest and alliance and assures logistic support to the visiting companies at every stage of the placement process by making university infrastructure available to them.

- To facilitate the employment of outgoing students, the placement cell has organized several campus interviews. This year, several reputed private companies and organizations have visited the Placement cell of the University for recruitment of skilled graduate and post graduate students.

- Zeneva Crops Science Pvt. Ltd., Lucknow conducted campus interview on 17-02-2019 and appointment letter has been given by the Company to 47 selected students of agriculture and horticulture for the posts of Sales Representative and Sales Trainee.

- Along with the expert team, Chairman of Bhavdiya Group of Institutions, Sewar (Baraikala), Badagaon visited the university two times and selected 07 post graduate students tentatively on 10.05.19 for the posts of Assistant Professor in different discipline of agriculture viz. Agronomy, Plant Protection, Genetics and Plant Breeding, Agricultural Economics. Among them, 04 students (one in each of the above discipline) got appointed finally as Assistant Professor in that institution.

- Fifteen students from College of Fishery Science were selected tentatively for the posts of Sales Executive by campus interview on 07.06.2019 by Dayal Group, Lucknow.

- Again, a total of 13 students were tentatively selected from College of Agriculture and College of Veterinary Science and Animal Husbandry for different posts by Dayal Group, Lucknow on 04.08.2019.

- Gram Unnati Foundation, Noida has selected 04 students from Agriculture and Horticulture College through campus interview on 18.09.2019.

- The Recruitment Process from three other reputed companies is also under progress.



Organization of Interview at Placement

Besides, several students have been placed in various reputed organization like Banks (PSUs), Tractor Company and Irrigation Equipment Manufacturing Company, Ordnance Factory and Software Companies etc. Further, many of students have also gone for higher education like M.Tech. programmes in reputed Institutions all over India. The details of placement are given below:-

Area of Placement	No. of Students
State Public Service Commission	5
Agricultural Technical Assistants	28
Tractor Industries	20
Irrigation Industries	4
Bank and Financial Institutions	4
Other private sector	46
Higher Education	6

STUDENTS ACTIVITIES:**EDUCATIONAL TOURS:**

University organized various educational tours for students.

- College of Agricultural Engineering, organized various educational tours

for students under NAHEP as per following details

- College of Veterinary Science & Animal Husbandry organized visits of its students to AMUL MILK Plant (BANAS Dairy), Lucknow, Uttar Pradesh on 10.12.2019 for veterinary undergraduate students to come across the practical aspect of the processing of milk so as to develop milk products in the real, systemic and industrial manner. Students observed the activities and functions carried out at the Milk Reception Area of the Plant, Pasteurization Plant, Monitoring Unit, Effluent Treatment Plant, Packaging Unit, Dispatch area and Products Loading Area.

- College of Veterinary Science organized another visit of students to IVR; where students visited the museum, library and various laboratories of the institution.



Study tour of students



Study tour of students

Study tour of students of College of Ag. Engineering

S.No.	Days	Date	Place	Universities/Institutes
1	1	6/1/2020	Prayagraj	Sam Higginbottom University of Agriculture, Technology and Sciences, Prayagraj, Uttar Pradesh
		To		
		6/1/2020		
2	2	7/1/2020	Jabalpur	Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur, Madhya Pradesh
		To		
		8/1/2020		
3	2	8/1/2020	Bhopal	Central Institute of Agricultural Engineering, Bhopal, Madhya Pradesh
		To		
		10/1/2020		
4	1	10/1/2020	Budhni	Central Farm Machinery Training and Testing Institute, Budni, Madhya Pradesh
		To		
		10/1/2020		
5	1	11/1/2020	Jhansi	Rani Lakshmi Bai Central Agricultural University,
		To	and back to MCAET	ICAR-IGFRI and ICAR-NRCAF, Jhansi, Uttar Pradesh
		14/01/20		



College of Community Science organized visits of its students

Duration	Institutes Visited	Date of visit	Team
27-29 Dec, 2019	Centre for Technology and Entrepreneurship Development, Jagdishpur	27.12.2019	Total 42 students
	National Institute of Fashion Technology, Raebareli	27.12.2019	Dr. Sadhna Singh,
	Institute of Entrepreneurship Development UP, Lucknow	27.12.2019	Tour In-charge
	Dietetics Unit, King George Medical University	28.12.2019	
	College of Community Science CSAUA&T, Kanpur	28.12.2019	Dr Poonam Singh,
	Gulati textiles and Essele palace Kanpur	29.12.2019	Co- Tour In-charge
	Pushpanjali Gramudyog Sew, Samiti Pratapgarh	20.1.2020	Total 36 students
	College of Community Sciences, SAM Higginbottom University of Agriculture, technology and Sciences	20.1.2020	
20-22 Jan, 2020	Rajshiri Tondon Open University, Allahabad	21.1.2020	Dr. Sadhna Singh,
	Department of Home Science, Allahabad University	21.1.2020	Tour In-charge
	Carpet Unit, Gopiganj	21.1.2020	
	Department of Home Science, Banaras Hindu University, Varanasi	22.1.2020	Dr Poonam Singh,
	National Institute of Fashion Technology, Chokaghat Varanasi	22.1.2020	Co- Tour In-charge
	Indian Institute of Handloom Technology, Varanasi	22.1.2020	



Students going on tour



Students going on tour

STUDENT DEVELOPMENT PROGRAMS

University is working hard to achieve the milestones in all dimensions by giving exhaustive trainings to its students, faculty as well as continuously providing health and extension services to farmers of Eastern Uttar Pradesh.

Student corporate interaction programs are being continuously organized so that students are also being prepared for corporate life.

SKILL DEVELOPMENT PROGRAMS ORGANIZED

1. Capacity building workshop on “Addressing human wildlife interface issues”.

Date: 22-24 October, 2019

Beneficiaries: Undergraduate and post graduate students of Veterinary College (total 46)



Study tour of students



Study tour of students

	Female		Male	
	ST	0	ST	3
3	ST	0	ST	3
8	SC	1	SC	7
	Disable		Disable	
35	Gen	7	Gen	28

2. One day workshop on “Capacity Building on Disaster Management”

Disaster management has been integral component of all the course curriculum being taught in agriculture universities. Hence, one day workshop on “Capacity building in Disaster

Management” was organized under NAHEP. The NDRF team and two experts were invited from outside to impart training.

Date: 4th November, 2019

Beneficiaries: Students of B V Sc & AH and Fisheries Sciences

Female			Total	Male			Total	Grand Total
ST	SC	GEN		ST	SC	GEN		
1	2	9	12	0	12	54	66	78



Training imparted by NDRF team

3. Training cum Workshop On Animal Welfare and Equine Medicine Three days training cum workshop on Animal Welfare and Equine Medicine organized by Department of Veterinary Medicine, College of Veterinary Sciences & Animal Husbandry, ANDUAT, Kumarganj,



Training imparted by NDRF team

Ayodhya, in collaboration with Brooke hospital for animals (India)

Date: 26th to 28th February 2020

Female			Total	Male			Total	Grand Total
ST	SC	GEN		ST	SC	GEN		
0	0	7	7	3	9	30	42	49

1. Training on mushroom

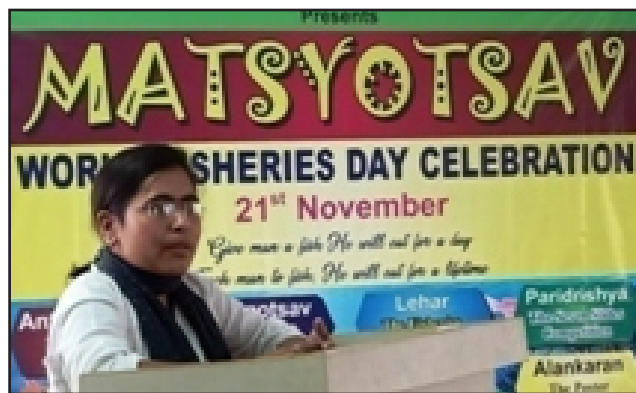
A training camp through NAHEP was organized from 20th to 21st February, 2020 to 25 students on mushroom productions technique for imparting employment-oriented education to students of college.

CULTURALACTIVITIES:

- Cultural events on various occasions like freshers' welcome, during seminars and during celebration of various days are regularly organized by students.



Certificate distribution in Mushroom training



Cultural Activities

- Students also participated in various competitions. Department of Veterinary Physiology & Biochemistry organized Institute level Quiz competition on behalf of Society of Animal Physiologist of India on 20th Jan. 2020. Selected students were sent to Mathura to participate in All India Quiz Competition and secured IInd position in North Zone.



Selection of Students for National Quiz

AWARENESS & SOCIAL ACTIVITIES

- Blood testing Camp was organized by Officer-In-Charge of Hospital in Collaboration with Department of Veterinary Physiology for university girls and working woman.



Awareness Program

- Department of Veterinary Public Health and Epidemiology in collaboration with University Hospital, has organized around 12 educational campaigns on " Rabies awareness" , "Antibiotic resistance awareness" and "Swachh Doodh Utpadan".

- Exhibition to create the awareness about modern fishery technologies.
- Group discussion on various social and current issues of national awareness.
- General cleaning in and around college and public places under Swachh Bharat Abhiyan.

CELEBRATION OF OTHER DAYS

The students actively participated in different other events like important national festivals- Republic Day, Mahatma Gandhi Jyanti, Narendra Deva Jayanti and Independence Day.

- 'Moronga Day' was organized at MES Vegetable Farm. This programme was inaugurated by Hon'ble Vice-Chancellor. Ten thousand saplings of improved cultivar of Moronga were distributed to farmers.

- Plantation week 09-15 August, 2020. During this period huge number of fruit trees, forest trees and road side avenues and shrubs were planted by staff members, scientists, foreign students and university authorities.

- World Veterinary Day on April 27th, 2019.

- Engineer's day and Vishwakarma Puja were celebrated.

- Gandhi Jayanti/ Shashtri jayanti/ Sardar Ballabh Bhai Patel Jayanti / Acharya Narendra Dev Jayanti were Celebrated

- **Breast Feeding Day:** Awareness programe on breast feeding was organised with students on nutritional importance of breast milk to children.

- **Women in Agriculture:** Women in Agriculture Day was organised in the college to mark the importance of women in agriculture, their roles and responsibilities, activities supported by agricultural women, health hazards to women while performing agricultural activities, contribution of ICAR and schemes and programmes for women etc.



Student's Orientation Programme

- **World Consumer Day:** World Consumer Day was celebrated in the college to disseminate awareness on consumer rights and importance, laws and acts related to consumer, government efforts for consumer awareness etc. Household methods to detect various adulterants in food were demonstrated among students. A skit was also organised on the importance on consumer rights.

- **Nutrition Week:** To aware the importance of nutrition in diet, nutrition week was celebrated in the college. The week was covered with the various activities like food fair, fireless recipe, nutrition quiz, health drinks, millets on your plate and healthy snacks etc.

- **International Women Day:** A workshop was organised to celebrate the international women day. Workshop was started with lighting of the lamp followed by various activities like guest lectures, dance and drama were organised to mark the day. Students from various colleges of the university along with faculty attended the programme and contributed to make it a success. Vote of thanks was given at the end of the programme.

- **Children's Day:** To mark the birth anniversary of Pandit Jawaharlal Nehru ji and his love to children the programme was organised in the college. Students from two schools participated in it with faculty and students of the college. Activities like rangoli, painting and cultural programme were organised.

- **Agricultural Education Day:** Agricultural Education Day was organised on 3rd December 2019 in the college on the importance and role of agriculture in development, importance of agricultural education in development, status and scenario of agricultural education, schemes and programmes for promoting agricultural education, role of ICAR, efforts of ICAR and international agencies in development of agricultural education.



Cultural Activities



Awareness Program



Fresher's Students Welcome Programme

RESEARCH

DIRECTORATE OF RESEARCH

Mission:

The Directorate of Research is solely responsible for overall supervision, guidance and co-ordination of need based and production oriented agricultural research in 26 districts belonging to seven revenue divisions viz; Ayodhya, Basti, Devipatan, Gorakhpur, Varanasi, Azamgarh and Vindhyachal Dham of eastern U.P.

Service Area:

The Directorate of Research governs the research activities in three agro-climatic zones i.e., North Eastern plain zone (NEPZ), Eastern plain zone (EPZ) and Vindhyan zone (VZ). The university has seven research stations in different agro-climatic zones under its jurisdiction. These research stations are listed below:



NEPZ:

- Zonal Agril. Research Station (ZARS) Basuli (Mahrajganj) – Centre for crop research.
- Crop Research Station (CRS) Ghaghraghat (Bahraich)- Main centre for DeepWater Rice Research.
- Crop Research Station (CRS) Bahraich- Centre for Maize, Jute and Agrometeorology research.

EPZ:

- Main Campus, Kumarganj

(Ayodhya)- Centre for basic and applied research through different colleges in various disciplines of Agriculture, Horticulture and Forestry, Veterinary Science and Animal Husbandry, Fisheries, Agril. Eng. & Tech. and Home Science.

- Crop Research Station (CRS), Masodha (Ayodhya)- Main Centre for Rice Research.

- Zonal Agricultural Research sub-station (ZARSS) Baribagh & Ankushpur (Ghazipur)- Centre for crops research

VZ:

- Zonal Agricultural Research Station (ZARS) Tissuhi, (Mirzapur)- Centre for Pulses and Oilseed research.

Zonal Research and Extension Advisory Committee (ZREAC) Meeting:

ZREAC meetings were held on 07-06-2019 at Crop Research Station, Masodha for Eastern Plain Zone, North Eastern Plain Zone & Vindhyan Zone and on dated 04.11.2019 at Crop Research Station, Ghaghraghat for North Eastern Plain Zone. In these meetings, the scientists as well as farmers of respective zones participated. The technical problems were solved by the scientists and technical programmes of scientists of Crop Research Stations were also discussed and finalized.

Technical Programme Meeting:

The technical programme meetings were convened from 21-23 May, 2019 in Kharif season and 15-16 October, 2019 during Rabi season. In these meetings, the technical programmes of the research projects were thoroughly discussed and approved after necessary corrections.

QRT:

- QRT of AICRP on Rice as well as Deep Water Rice was held during 5-6 April, 2019 at BHU, Varanasi under the Chairmanship of Dr. H.S. Gupta.



- QRT of AICRP on Potential Crops headed by Dr. M.P. Pandey was held on 20-01-2020.
- QRT of AICRP on Agroforestry was held at OUAT, Bhubaneshwar, Odisha under Chairmanship of Dr. K.R. Dhiman during 7-8 February, 2020.

RESEARCH PROJECTS:

Based on the location specific problems affecting productivity and farmers needs, the research programmes are formulated by the scientists concerned. During 2019-20, 52 research projects are functioning in the University. The details are given below:

A- All India Co-ordinated Research Projects (75% ICAR share and 25% State share)

S.No.	Name of the Project/ Scheme	Mobile No.	Name of PI	Year of Start
1	AICRP on Rice Improvement	798044074	OIC, CRS Masodha	1976
2	AICRP on Deep Water Rice	9415560503	OIC, CRS Ghaghraghat	1976
3	AICRP on Maize Improvement	8707839770	OIC, CRS Bahraich	1976
4	AICRP on Wheat & Barley Improvement	9450882524	Dr. Vinod Singh	1987
5	AICRP on MULLaRP	7408836617	HOD, GPB	2001
6	AICRP on Chickpea	7408836617	HOD, GPB	2001
7	AICRP on forage Crops Improvement	9415890200	Dr. R.S. Yadav	2001
8	AICRP on Potential Crops	9454212742	Dr. R.D.S. Yadav	1995
9	National Seed Project (Crops)-	9454212742	Dr. R.D.S. Yadav	1978
	1- Seed Technology Research			
	2- Breeder Seed production			
10	AICRP for Dry land Agriculture	9415515216	Dr. Neeraj Kumar	1987
11	AICRP on Irrigation Water management	9450763877	Er. R.C Tiwari	1980
12	AICRP on Integrated Farming System	9453601240	Dr. Gajendra Singh	1976
13	AICRP on Vegetable Improvement	9450737300	Dr. G.C. Yadav	1980
14	AICRP on Potato Improvement	9453956534	Dr. R.K.Pathak	1987
15	AICRP on Spices		HOD, Veg. Science	1995
16	AICRP on Arid Fruits	9415439398	Dr. Bhanu Pratap	1987
17	AICRP on Medicinal & Aromatic Plants	9936888458	Dr. D.P. Mishra	1980
18	AICRP on Agro-forestry	9454932174	Dr. S.K.Verma	1987
19	AICRP on Agro-meteorology	9415720436	HOD, Agromet.	1990

B. Scheme 100% Financed by ICAR

1	National Initiative on climate resilient agriculture (NICRA) – Dryland Agriculture	9415515216	Dr Niraj Kumar	2010 to contd.
2	NICRA (Agro-meteorology)	9415720436	HOD, Agromet.	2010 to cont.

C. Research Projects Financed by International Agencies.

1	Accelerated Genetic Gain in Rice –(Aggri. Alliance –Marginal Environment (IRRI)	HOD Crop Physiology	2019-20 to
			Cont.

D. Research Projects Financed by Other National/ State Agencies

1	Gramin Krishi Mausam Seva (i) Head Quarter, Kumarganj (ii) Bahraich Ministry of Earth Science (IAAS)	Dr. A.N. Mishra 9450637552	1993 to contd
2	Mission Integrated Development of Horticulture (MIDH)	Dr. S.K. Pandey 8127835556	2005 to contd
3	Forecasting Agricultural output using space, agro-meteorology and land based observations (FASAL) Ministry of Earth Science (Govt. of India)	Dr. A.N. Mishra 9450637552	2005 to contd
4	Creation of Seed hubs for increasing indigenous production of pulses in India (NFSM)	Dr. R.D.S. Yadav 9454212742	2016-17 to 2019-20
5	Collection, characterization, evaluation, maintenance and registration of minor seed spices grown in farmers' field – (PPV & FRA, GOI)	HOD, Veg. Science	2017-18 to 2019-20
6	Capacity Building and Technology Demonstration on Processing of local fruits and vegetables for alternate livelihood of Tharu Tribe Women.- (DST, GOI)	Dr. Bhagwan Deen 9451203838	2017-18 to contd
7	Centre of Excellence in Rice (State Govt.)	Dr. A.K. Singh	2018-19 to contd
8	Establishment of model seed testing lab. Under quality control Component of sub mission on seeds & planting material (SMSP) (Ministry of Agril. & Farmers Welfare ,GOI)	Dr R.D.S.Yadav 9454212742	2018-19 to contd
9	Establishment of Feed Analysis and Quality Control Laboratory	Dr. V.K. Singh, Nutrition Deptt.	2019-20
10	Production of Elite Germplasm through Embryo Transfer Technique in Bovine (RKVY)	Dr. Ravinder Kumar	2019-20
11	Strengthening of Seed Production Farms (RKVY)	Dr. S.C. Vimal	2019-20
12	Effect of Nano fertilizers on rice - wheat and potato	Dr. R.K. Pathak	2019-20 to 2021-22

E. Non - Plan Projects 100% Financed by State Govt.

1	Sodh Scheme (Rice , Masodha)	OIC, CRS, Masodha
2	Oil Seed Project	HOD, GPB
3	Pulses Project	HOD, GPB
4	Research on Vegetable Crops	HOD, Veg. Science
5	Research on Crop Physiology	HOD, Crop Physiology
6	NARP (Adjusted), Kumarganj, Faizabad	DAES
7	NARP (Adjusted), Masodha, Faizabad	OIC CRS Masodha
8	Foundation and breeder seed production unit and strengthening of seed testing lab.	JD(S&F)
9	NARP (Adjusted), (Tissuhi), Mirzapur	OIC ZARS Tissuhi
10	Sodh Scheme, Tissuhi (Mirzapur)	OIC ZARS Tissuhi
11	Flood Rice Research Scheme : Ghaghrahaht (Bahraich)	OIC CRS Ghaghrahaht
12	NARP (H.Q.), Ghaghrahaht (Bahraich)	OIC CRS Ghaghrahaht
13	Jute Establishment Scheme : Bahraich	OIC, CRS, Bahraich
14	NARP Sub Station – Bahraich	OIC CRS Bahraich
15	NARP (Adjusted), Ghazipur	OIC, ZARSS Ghazipur
16	Sodh scheme, Ghazipur	OIC, ZARSS Ghazipur
17	Production and processing of fruits in usar wasteland	HOD Fruit Science
18	NARP adjusted Basuli	OIC, ZARS, Basuli



VARIETAL IMPROVEMENTS

The major research thrust in crop production has been to develop high yielding varieties of all important crops with resistance to biotic and abiotic stresses. As a result during 2019-20, following improved varieties were developed–

Proposal of Varieties submitted for Notification:

Rice :-

- **NDR 9930111 (IET 19117):** NDR 9930111 is tolerant to submergence, Sheath rot, RTV, Leaf folder, whorl maggot, gundhi bug, stem borer, rice thrips having short bold grain type, duration 145 days and yield potential 50-55q/ha.

- **IR 64 sub-1:** IR 64-Sub 1 is tolerant to submergence, BLB, Sheath blight, Leaf blast, Brown Spot, RTV, GLH, Case worm, WPBH, PH, GMB1 and stem borer. This variety is having long slender grain type, duration 125 days and yield potential 35-40q/ha.

Varieties Submitted for Release to SVRC :

Pulses :

- **Narendra Matar-1:** It is erect medium tall creamy white large seeded type variety, resistant to powdery mildew and tolerant to rust. Maturity 115-118 days. Yield 24-25 q./ha.

- **Narendra Matar-2** Dwarf plant type (51 cm) with semi spreading growth habit, medium green foliage, medium seed size (18.4/100 gram). Resistant to powdery mildew and rust. Tolerant to leaf minor, aphid and stem fly.

- **Narendra Chana-1/ NDG14-11 :** Suitable for timely sown condition in chickpea growing areas of Uttar Pradesh

- **Chickpea :** NDG 15-02 : For timely sown

Entries Identified for release

- **Rice : NDGR-702** (NDGR-207/IR49906-B-B-B-10-GHT-1) identified as promising in state level trial conducted during last 3 years. The state level committee has recommended for submission of its release proposal in SVRC.

- **Bottlegourd : NDBG-16-** A bottle gourd variety identified for Zone I (J&K and Uttarkhand) and VIII (Karnataka, TN and Kerala) during 38th group meet of AICRP held of 25-27 Oct.,2020. This is long fruit type variety with yield potential of upto 542.2 q/ha at IIVR Varanasi and national average yield of 314.7 q/ha. Suitable for cultivation in *Zaid* and *Kharif* season. This variety was developed by Dr. G.C. Yadav, Assoc. Prof., Deptt. of Vegetable Science.

- **Wheat :** NW-6046 : For Rainfed Condition

- **Barley :** NDB-1665, NDB-1673 – For Saline/alkaline condition

TECHNOLOGY GENERATED:

- Time of Planting of potato from 25th October to 5th November & harvest time at 90 days followed by transplanting of onion there after is recommended for potato – onion cropping sequences for eastern U.P.

- Application of Topramezone + Atrazine 35g+ 250g/ha and Tembotrione + Atrazine @ 120g+ 250g/ha as post emergence minimized the weed infestation and enhanced the green forage yield of forage maize.

- Appropriate planting techniques for sodic soil (i) deep and larger pits are preferred. For forest tree species pit size of 60x60x60 cm is suitable, whereas for fruit species it should be of 90x90x90 cm; (ii) As far as possible, the kankar pan must be removed; (iii) The pits should be filled up to the

height of 10 cm above the ground with good soil, sand and FYM in the ratio of 2:1:1. (iv) Soils with high pH (more than 8.5) should be treated with gypsum to provide a more favourable medium for initial plant growth during the establishment period and (v) Digging of pits should be done during April-June and planting during July-September when the soil moisture is high.

RESEARCH ACHIEVEMENTS

Rice:

Crop Improvement:

Advance Lines:

- **NDR 8399-3:** Medium slender and good cooking quality with mild aroma yield ranges 30-35 q/ha, Kalanamak grain type.
- **NDR 9004:** Fine, dwarf, submergence tolerant, very good cooking quality and yield range 55-60 q/ha.
- **NDR 9005:** Fine, dwarf, submergence tolerant, very good cooking quality and yield range 58-60 q/ha.
- **NDR 9019:** Late condition highly tolerant to submergence, long slender grain and yield range 60-62 q/ha.
- **NDR 9517:** Late, submergence tolerant, very good cooking quality and yield range 55-60 q/ha.
- **Promoted/ Repeated entries in State trials:** Seventeen cultures were promoted in various eco systems viz. unirrigated condition (100-120 days)-NDR 1169-1-1; early irrigated (100-120 days)-NDR 2104, NDR 2105; medium irrigated (120-140 days)- NDR 3120-10-05; Late duration (>140 days)-NDR 40181, NDR 40182, NDR 40183, NDR 40501, NDR40502, NDR 8850 and NDR 9005; slender grain non aromatic- NDR 6304 (LS) & NDR 6306 (MS); local aromatic line

NDR 8400-3 & NDR 8418-3; Usar condition- NDRK 50053, NDRK 50055, NDRK 50059, NDRK 50065, NDRK 50069, NDRK 15-1, NDRK 15-2, NDRK 15-3, NDRK 15-4, NDRK 15-5.

Lines identified for Specific Characters:

- **NDR 9730018:** Late condition highly tolerant to submergence, long slender grain with yield range from 60-62 q/ha.
- **NDR 9501:** Late submergence tolerant, very good cooking quality and yield range 55-58 q/ha.
- **NDR 8017:** Fine, dwarf, submergence tolerant, very good cooking quality and yield range 55-60 q/ha.

Entries promoted & Nominated in National Trial (AICRIP)

- NDGR 706 (IET-26741) recommended for third year of testing in IVT Deep Water trial.
- NDGR 709 (IET-28319) recommended for second year of testing in IVT Deep Water trial.
- NDGR 713 and NDGR 714 as new nomination in IVT-Deep Water.
- NDGR 1543 and NDGR 1545 as new nominated in IVT-Semi deep water
- **Variety in pipeline:** The DWR (deep water rice) entry **NDGR 706** (IET 26741) a derivative of cross(Pankaj x Jalnidhi) and entry **NDGR 709** (IET 28319) a derivative of cross (NDGR207 x IR49906-B-B-B-10-GHT-2) developed by the centre has been found most promising with superiority of grain yield 31% and 17% over best check respectively. The entries are promoted for third and second year of testing in AICRIP deep water experiment in kharif 2020 to confirm the results and its wider adoptability.



- **Entries under testing in National Trials:**

The most promising semi-deep water (50-100 cm water depth) entries **NDGR- 1543** and **NDGR-1545** have been included as new nomination during the year 2020 in Initial variety trial-semi deep water Whereas, the deepwater entries i.e. **NDGR -713** and **NDGR 714** has also been nominated in Initial variety trial - DW for testing its stability and adoptability parameters at National Level.

- **Entries under testing in State Level Trials:** Altogether four entries (promising) viz., **NDGR-711, NDGR-712, NDGR-1517** and **NDGR-1520** are running in Regional Agricultural Testing and Demonstration Scheme (RATDS) and State Level Trial for confirming the results of yield parameters at various region of state, U.P.

Wheat & Barley :

Advanced lines :

Wheat:- NW-8003, NW—8004, NW-8005, NW-8010, NW-8012, NW-8013, NW-8017, NW-8019 & NW-8022. Beside this NW-8028, NW-8029, NW-8030, NW-8031, NW-8032, NW-8033, NW-8034, NW-8035, NW-8036, NW-8037, NW-8038, NW-8039, NW-8040, NW-8041, NW-8042, NW-8043, NW-8044, NW-8045, NW-8046, NW-8047, NW-8048, NW-8049, NW-8050, NW-8051, NW-8052, NW-8053, NW-8054, NW-8055, NW-8056 & NW-8057 contributed in IPSPN during 2020-21.

Barley:- NDB-1754, NDB-1756, NDB-1757, NDB-1776, NDB-1777, NDB-1778, NDB-1779, NDB-1780, NDB-1781, NDB-1782, NDB-1783, NDB-1784, NDB-1785, NDB-1786, NDB-1787, NDB-1788, NDB-1789, NDB-1790, NDB-1791, NDB-1792, NDB-1793, NDB-1794, NDB-1795, NDB-1796, NDB-1797, NDB-1798, NDB-1799 & NDB-1800.

Lines identified for specific characters:

- More than 136 Lines were selected and identified for different specific characters i.e., Salt Tolerance, Heat Tolerance, Early Maturity & Rust Resistance.

Chickpea :

Lines identified for specific characters: Extra early (NDG 18-4 and NDG 18-5); Green seeded (NDG 18-2), Double podded (NDG 17-3-1, NDG 17-6-2, NDG 17-6-3 and NDG 19-3)

MULLARP Crops :

Advanced Lines:

Narendra Urd-3 (NDUZ 14-21):

It has been identified for release from UP State Department of Agriculture for *Zaid*, yield 8-10 q/ha, moderately resistant to MYMV and resistant to *Cercospora* Leaf Spot.

NDP2017-06:

It has been promoted from IVT to AVT-1 in Coordinated Fieldpea trials.

NDM 17-07:

Contributed for testing in mungbean Coordinated trials.

NDUK 17-05:

Contributed for testing in urdbean Coordinated trials.

Potential Crops:

Fababean :

Advanced lines: NDFB 13, NDF13-2, NDFB 14, NDFB 16-2, NDFB 16-3 and NDFB 17-2 NDFB 17-1 of Faba bean.

Lines identified for specific characters:

- NDFB 16-2 has been identified for Early maturity, tolerant to lodging, synchronous maturity but moderate yielder and tolerant to

diseases and insect pests.

- NDFB-13 and NDFB 14 have been identified for early maturity, resistant to diseases, low pod shattering, high seed yielder.

Forage Crops:

- **Advanced lines:**

Forage bajra: NDFB-1502, NDFB-936, NDFB-1603, NDFB-914, NDFB-926, NDFB-939, NDFB 942, NDFB1504 & NDFB 1801

Forage oat: NDO-1102, NDO-1202, NDO-1501, NDO-1709, NDO-901, NDO-726, NDO-729, NDO-1802, NDO-1902 & NDO-1904

Hybrid napier : NDHN-9 , NDHN-10.

Lines identified for specific characters:

- **Forage Bajra:**

(i) NDFB 942- higher number of tillers & plant height

(ii) NDFB1504- stem thickness & profuse foliage

- **Oat:**

(I) NDO-1802-GFY

(ii) NDO-1902- higher GFY & CPY

Maize :

- Application of Atrazin @ 1.0 kg/ha followed by Topramezone @ 25.2 g + Atrazin 750 g, at 25 DAS produced 51.4 q/ha grain yield with net return of Rs. 52440/ha.

- Application of 120 kg N₂/ha produced 58.95 q/ha grain yield alongwith net return Rs. 46530/ha with BC ratio 2.15.

- Application of 200:60:80 kg N:P₂O₅:K₂O/ha along with plant density 66000/ha produced 64.9 q/ha grain yield alongwith net profit Rs. 64350 with B.C. ratio 4.02.

- Application of 200:80:60 kg N:P₂O₅:K₂O+ 20 kg Zinc/ha + 5 t FYM produced 56.20 q. grain

yield as well as net profit of Rs. 62130/ha with B.C. ratio 3.32.

TECHNOLOGY TRANSFERRED AND REFINED:

- Multi use of water either renovating old ponds or constructing new ponds in the areas where water may be available either through canal and rains for pisi culture and on bunds of pond banana, vegetables and fuel trees may be grown. In such pond areas command, integrated farming system including pisciculture, duckery and cropping system should be adopted by farmers to achieve more net profit as compared to cropping system of rice-wheat + rai.

- Improved water management practices in rice (7cm water, 1-3 days after disappearance of ponded water applied with check basins of 10x10m) should be practiced in place of continuous ponding of water through plot to plot or field to field wild irrigation method.

- Pigeon pea grown on raised bed in paired rows at 50cm spacing intercropped either with 5 rows of short duration rice (NDR -97) in sunken beds or 3 rows of urd (blackgram) on raised beds should be practiced by the farmers of canal command at tail end during kharif season for getting more profits.

- The integrated farming system with multiple use of water (such as pisciculture and duckery) was more profitable as compared to the conventional cropping system. The highest benefit cost ratio of 2.40 was observed in integrated farming system as compared to Rice – Wheat + Rai system with (B:C ratio of-1.60). The farmers of ORP area are very much convinced with this system.

- Pigeon pea grown on raised bed in paired rows at 50cm spacing where intercropped with 3



rows of urd (100 cm) was found more productive and remunerative system under poor availability of canal water at tail end of minor in kharif season.

- Intercropping of gram + mustard (4:2) was found more economical in rabi season under poor availability of canal water.

- Maximum grain yield of wheat was realized when crop was sown with bed planting and fertilized with 125% of recommended dose of N (125 kg ha⁻¹) under the schedule of 4cm irrigation at 1.0 IW/CPE ratio at all the five critical stages. Highest WEE was computed with 4cm water at 0.8 IW/CPE at CRI, late jointing and milking stages.

- Rice-potato-okra and maize-potato-okra were found the most remunerative cropping systems under head and tail end of distributory, respectively. Okra crop is sown in summer needs more irrigation. It was also observed that okra should be sown on raised beds and 5-6 cm water should be given at 7 days interval after first irrigation (at 20 DAS).

- Application of 75% recommended dose of fertilizers (NPK) + 25% N through bio-compost with five irrigations at critical stages in case of wheat was found suitable.

- Sowing of green gram on raised beds in paired rows along with furrow irrigation at 1.0 IW/CPE or irrigation at 10 days interval is recommended.

- Drip irrigation @ 80% wetted surface with 75% N was found suitable for irrigation in Aonla orchard.

- Drip irrigation @ 80% of PE with 100% N was found suitable for sugarcane crop production being high yielding and more remunerative irrigation system.

- Application of irrigation with 7cm at 3

DADPW before P.I. and at 1 DADPW from PI to milking stage of scented rice with 75% RDF + 25% N through bio-compost has been found high yielding and more remunerative for production of scented rice.

- Rabi maize sown 15-25 October was found optimum period with 1.0 IW/CPE moisture regime for getting maximum production and higher net return.

- Irrigation level at 0.8 IW/CPE with integrated nutrient supply system (75% RDF + 25% N through bio compost) was found the most suitable for getting higher production and economic return from broccoli.

- Wheat crop sown on 25th December and irrigated at 1.0 IW/CPE gave highest yield.

- Direct seeding by drum seeder received irrigation at 7cm water at 4 DADPW gave high yield and more net return of rice.

- Mentha received irrigation at 1.0 IW/CPE under raised bed paired row planting resulted in high oil yield and net return.

- Conjunctive use of canal and ground water (2:1) with 6cm depth at critical stages (CRI, late jointing and milking stages) in check basin (5x10m²) in wheat crop gave higher yield (33.59%) , water efficient (48.43%) and more remunerative with benefit-cost ratio of 2.31.

- Rajmash irrigated at 60% PE by drip method with 75% RDN every 3rd day resulted higher yield and net profit Rajmash beans.

- Bed planting of wheat received irrigated at 1.0 IW/CPE higher yield of wheat (48.34 q/ha) with highest benefit cost ratio of 1.87.

- Potato Irrigated at 1.0 IW/CPE in every furrow with 75% RDF + 25% RDN through FYM resulted the significantly higher yield of tuber 315.50 q/ha with benefit cost ratio of 4.32.

- Brinjal irrigated at 1.0 IW/CPE in paired row planting of brinjal on raised broad base beds gave more timely yield (391.91 q/ha) and highest benefit cost ratio of 5.6.

- Cabbage irrigated at 1.0 IW/CPE with integrated nutrient management (75% RDF + 25% RDN through bio-compost) recorded the highest yield (371.25 q/ha) and found most economical with 6.16 benefit-cost ratio.

- Summer maize hybrid irrigated at 1.0 IW/CPE in paired row planting on raised broad base bed with rice straw mulch @ 5t/ha resulted the highest yield of 60.93 q/ha with benefit cost ratio 2.39.

RECOMMENDATION:

- Paired row planting of brinjal on raised broad base bed irrigated at 1.0 IW/CPE is recommended for obtaining highest yield net return.

- Irrigation scheduled at 1.0 IW/CPE (I_3) with Integrated nutrient management system (75% RDF + 25% RDN through bio-compost) is recommended for cabbage production.

- Irrigation at 1.0 IW/CPE in Paired row planting of maize on broad base raised beds with rice straw mulch @ 5 t/ha is recommended for high maize yield and maximum net profit.

- 1 Irrigation at 1.0 IW/CPE in Paired row planting of maize on broad base raised beds with rice straw mulch @ 5 t/ha is recommended for high maize yield and maximum net profit.



Maize crop planted under different treatments of land configuration and moisture regime under mulch



Paddy crop grown under different moisture regimes and weed control practices in drum seeded rice



DRYLAND AGRICULTURE:

Rainwater Management:

Catchment storage command area relationship for enhancing water productivity in micro water shed is in progress with completion of water harvesting ponds at Agronomy Research Farm.

Cropping System:

During *kharif* season, common seed yield of 20.25q/ha of paddy was received. The Paddy Yield Equivalent was recorded significantly highest (90.56 q/ha) with Paddy-Chickpea cropping system followed by Paddy- Lentil (82.31q/ha). Moisture Use Efficiency (11.11 kg/ha-mm), Net return (Rs.102296) and B:C ratio (3.88) also maximum with Paddy- Chickpea cropping sequence.

Nutrient Management:

Among the cropping systems, pigeonpea + sesame was found the most beneficial as compare to pigeonpea + sorghum or pigeonpea sole. Among the nutrient management practices, maximum pigeonpea yield as well as intercrop crops (Sorghum and sesame) was recorded with 75 % RDF + FYM @ 5 t ha⁻¹ + Sulphur @ 40 kg ha⁻¹ + ZnSO₄ @ 25 kg ha⁻¹ + B @ 1.5 kg ha⁻¹

Rainfed Integrated Farming Systems :

Rainfed agriculture occupies approximate 68% of India's cultivated area and supports about 40% of the human and 60 % of the livestock population. It produces about 44 % of the food requirement. In view of above, the experiment on **Rainfed Integrated Farming Systems** was initiated from 2017. In this experiment, Two Blocks have been selected for survey in Faizabad

district which comes under rainfed situation. The major area of these two blocks comes under rainfed situations. Three villages selected from each block and 40 farmers selected from each village. The Survey of all six villages namely, Biraulijham, Amawanchhetan and Bhabarmau of **Amaniganj Block** and Khadbhariya, Prashpursathera and Lohanipaliya of **Harigtonganj Block** have been completed and all the data collected from 6 villagers of 240 farmers have been filled on excel proforma sent to AICRPDA, Hyderabad. After analysis of collected data, select a IFS village “ **Balarmau**” which comes under Block Baldirai, District- Amethi. In IFS village 30 farmers are selected for IFS study.



View of rice based cropping system



Hon'ble VC Visited the AICRPDA Trials



View of alternate land use system experiment

INTEGRATED FARMING SYSTEM:

Under the Integrated farming system Model(IFS - Model), four unit were maintained at Agronomy Research farm i.e. crop unit, dairy unit, Horticulture Unit and Fisheries Unit. Integrated farming system model of one hectare at

Agronomy Research farm gave gross income (Rs 187749/ha), net income (Rs 62639/ha) and benefit : cost ratio (0.50). The economics of fish pond has not included because fish pond is under renovation.

DIVERSIFICATION AND INTENSIFICATION OF RICE-WHEAT CROPPING SYSTEM

Paddy – **Potato** - GreengramPaddy – **Wheat** – Maize+ cowpea (fodder)Paddy – **Lentil** - SudanchariKarvi– **Mustard** - Blackgram

Field View of on Station Research



SEED TECHNOLOGY:

- While, redefining the IMSCS 2013 for seed standards of DUS in rice, it was concluded that there is no need to change the standard of ODVs for foundation seed but the ODVs may be considered to the level of 30 per kg instead of 20 per kg for certified seed in rice.

- The old seed lots of preceding year were seemed to be not-revalidated for pursuing crops season in wheat crop.

- Hydro-priming and seed coating with drought alleviating bacteria+ biogrow followed by hydro-priming and seed coating with Bio NPK treatment could be utilized for enhanced first count, germination, vigour index-I, vigour index-II, speed of germination and final plant establishment in lentil cv KL 320 and fieldpea cv. Racha-na.

- Foliar spray of Salicylic acid @400ppm could be exploited to increase number of primary and secondary branches per plant, total number of siliqua per plant, plot yield and harvest index in mustard cv.NDR 8501.

- The seed health status of farmers' saved seed with respect to insect infestation is becoming quite alarming. Farmers should be cautioned to adopt advance technique to same with seed storage insect-pest.

- Emamectin benzoate (Proclaim 5 SG) @ 40mg /kg seed was found superior in term of germination (88.3%) with 0.7 % insect damage among all the treatment. Among botanicals, Neemazol 10,000ppm @ 1.5ml/kg seed could be considered for standard seed germination (84.7%) with 1.98% insect damage followed by *Acorus calamus* TNAU Formulation @10ml/kg which was at par with Emamectin benzoate @ 40mg /kg seed. However, all the botanicals were found at par with Deltamethrin 2.8 EC @ 0.04 ml/kg seed.

- Spraying of Emamectin Benzoate 5 SG @0.3ml/L was found the best treatment followed by spraying of profenfos 50 EC 50EC @1ml/L,

neemazol 1000ppm @1ml/L and malathion 5% @10kg/acre dusting at 50% pod maturity and maturity stages.

- The sieve size on recovery and seed quality parameters in ricesieve size of 1.0 mm was found better in comparison to recommended sieve size 1.85mm for higher seed recovery, physical purity, germination, etc. in rice cv. Sarjoo52.

AGRO-METEOROLOGY:

Agro-climatic Characterization

- Distribution of rainfall in the area was erratic in nature. S-W monsoon rainfall variability of Eastern U.P. from 1986-2019 showed declining trend in the recent years over normal rainfall.

- Rainfall variability over normal during S-W monsoon period of Eastern U.P. reveal that rate of decrease of rainfall over normal is approximately one & half times. Frequency of decrease of magnitude rainfall over is 60% as compared to 40% above normal in recent years. However extreme of above & below normal is almost same (+46% & -45%).

- South west monsoon partitioned about 80% of total rainfall in the region. Highest partitioning during SWM was experienced in NEPZ (82.3%) followed by VZ (80.7%). It is quite obvious that summer and winter rain in EPZ was higher as compared to other zones which facilitates to grow efficiently winter and summer crops with little irrigation.

- Seasonal rainfall status of U.P. during last six years reveal that average rainfall during S-W monsoon period occurred about 80% of the normal rainfall (829.8mm) in the region.

- Agro-climatic onset of monsoon for the region can helped the farmers for crops growing well in time. Agro-climatic onset of monsoon of different district of Eastern U.P. reveal that on an average south west monsoon occurs on 21st June in Eastern U.P.

- The average summer season rainfall during

El Nino years from March to May was less than the normal rainfall in Eastern U.P. Maximum departure (20.3 percent) was recorded in Gorakhpur district followed by 10.1% in Ghazipur district. The minimum departure (1%) over normal rainfall was recorded in Ballia district followed by Gonda district (2.5%).

- The average annual rainfall or S-W monsoon season rainfall were less than normal rainfall during the years with El Nino. Hence, El Nino unambiguously serves as a signal of deficit rainfall for the Eastern U.P. during the south west monsoon season and if it does not happen, leads to deficit annual rainfall.

CROP WEATHER RELATIONSHIP

Mustard :

- The maximum Accumulated GDD requirement from sowing to maturity were recorded 1547 °C days in 25th Oct. sowing in NDR-8501 variety while minimum accumulated growing degree days from sowing to maturity 1303 °C days was observed under late sowing (14th Nov) in Varuna variety.

- The maximum Thermal use efficiency requirement from sowing to maturity was recorded 0.64 at growing environment of sowing 25st Oct. while minimum Thermal use efficiency from sowing to maturity 0.54 was observed under growing environment (14th Nov.).

Maize :

- Growing environment of 5th July recorded higher days taken to different phenophases followed by 15th July. Sowing on 25th July however reduced the crop duration by 11 days over 5th July and 4 days over 15th July. Among the varieties, Kanchan took relatively longer duration and ultimately matured 3 days delayed over Azad hybrid-2 in 05th July sowing.

- Maximum temp. of 34.2°C, 33.2°C and 33.8 °C during sowing to emergence, knee high to

tasseling and milking to dough stage, respectively were favoured to get higher yield and yield attributing characters of maize. Among the varieties 33.2°C, 32.5°C and 36.6 °C during knee high to tasseling, to silking and silking to milking stages of variety Kanchan were recorded optimum maximum temperature for achieving higher yield as compared to other varieties under study.

GRAMIN KRISHI MAUSAM SEWA (GKMS) :

- Five days district level weather forecasts were received on each Tuesday and Friday through e-mail from RMC Lucknow.

- The forecasts were translated in to farmer's language. According to district level weather forecast, Agromet-advisory bulletins were prepared through Agromet-DSS software with consultation of different subject matter specialist's viz., Agronomy, Vegetable Science, Horticulture, Entomology and Plant Pathology, etc. for each districts of eastern plane zone of U.P. separately.

- Prepared district level Agromet-advisory bulletins were disseminated to the farmers through the leading daily news papers viz, Danik Jagran, Hindustan, Janmorcha and Amar Ujala, uploaded on website www.imdagrimet.gov.in and Kisan sms portal.

- SMS alert for extreme weather events has been sent through mKisan sms portal to the farmer's mobile phones on daily basis.

- District level weather forecasts & agromet-advisories were sent to AIR, Faizabad.

- Forecast verification was made with observed data and analysed the forecast errors hence to improve the forecast model.

- Annual success probability (%) of Kumarganj ranged from 76.7 (RHmax), 69.9 (Minimum temperature), 65.6 (Cloud cover), 63.2 (Maximum temperature), 60.7 (Wind direction),



33.0 (RHmin) and 15.2 (wind speed) respectively.

- Success probability & Usability (%) of cloud cover was (61.5) in kharif season.
- Ratio score, HK score, HS Score, Threat score, POD, FAR & RMSE for entire year of rainfall was 79%, 37%, 35%, 40%, 68%, 51% & 8.18 respectively and that for Kharif rainfall was 50%, 17%, 20%, 44%, 80%, 50% & 18.0 respectively.
- District wise F_1 , F_2 and F_3 stage yield forecast of paddy, wheat and mustard crops were estimated through statistical modeling for the districts falling under Eastern Plain Zone (EPZ) of U.P. and sent to IMD, New Delhi.
- Entered daily weather data of AMFU, Kumarganj in computer as per format provided by the IMD, Excel as well as DSSAT format and sent

Accuracy of wheat yield forecast during 2019-20.

District	% error from actual yield
Ambedkarnagar	8.1
Bahraich	-5.2
Ballia	6.5
Balrampur	7.2
Barabanki	-5.3
Basti	6.1
Deoria	5.6
Faizabad	-3.3
Gonda	4.8
Gorakhpur	-6.9
Kushinagar	3.5
Maharajganj	7.8
Raibareilly	-5.6
Sant-kabir-nagar	5.3
Siddharthnagar	-8.2
Sultanpur	7.3

to IMD, New Delhi and Pune.

- Daily weather data of AMFU-Faizabad, Ayodhya updated online in Indo Blight Cast Model (A potato blight forecasting system) for prediction of blight in the potato crop under GKMS project.
- Inputs to develop the mustard aphid forewarning model have been collected and sent to IMD, New Delhi.
- Provided other information required by India Meteorological Department, New Delhi and Pune from time to time.
- District wise F_1 , F_2 and F_3 stage yield forecast of wheat crop was estimated through statistical modeling for the districts falling under Eastern Plain Zone (EPZ) of U.P. and sent to IMD, New Delhi.

Accuracy of rice yield forecast during kharif- 2019

District	% Error from actual yield
Ambedkarnagar	6.8
Amethi	-7.4
Ballia	5.9
Barabanki	1
Basti	3.5
Bahraich	9.1
Balrampur	-6.1
Deoria	-8
Faizabad	6.2
Gorakhpur	2.4
Gonda	-9.8
Raibareilly	-9.7
Sant-kabir-nagar	-8.6
Sultanpur	-3.3
Shravasti	3.4
Siddharth Nagar	-4.1

Potato:

- One hybrid AICRP-P-43 along with five control varieties viz., AICRP-C-14, AICRP-C-17, AICRP-C-13 AICRP-P-1 and AICRP-P₉, were evaluated for 75 and 90 days harvest and maximum tuber yield of (35.40 t/ha) and 47.43 t/ha) at 75 and 90 days harvest was noted with AICRP-P-43 hybrid and it was significantly superiors to rest hybrid/control varieties.

- Five hybrids along with five controls i.e. AICRP-P-62, AICRP-P-51, AICRP-P-52, AICRP-P-16, K Sukhyati, AICRP-C-14, AICRP-C-17, AICRP-C-13 AICRP-P-1 and AICRP-P₉, were evaluated and maximum tuber yield (33.94 t/ha and 44.22 t/ha) under hybrid (AICRP-P-52) at 75 and 90 days crop as compared rest of the hybrid/control varieties.

- Nine hybrid/control varieties (four hybrids viz., AICRP-P-40, AICRP-P-44, AICRP-P-54, AICRP-P-55 along with five controls ie AICRP-C-14, AICRP-C-17, AICRP-C-13, AICRP-P-1 and AICRP-P-9) were tested at Faizabad (Ayodhya) centre and maximum tuber yield of 20.28 t and 35.49 t ha⁻¹ at 60 and 75 days harvest under AICRP-P-55 hybrid was noted and it was higher as compared to rest of the hybrids/control varieties.

- Ten hybrid/control varieties ie, AICRP-P-45, AICRP-P-46, AICRP-P-53, AICRP-P-56 and K Kesar five hybrids as well as five controls viz., AICRP-C-14, AICRP-C-17, AICRP-C-15, AICRP-RH-2 and AICRP-P-1 were evaluated at Faizabad (Ayodhya) centre and among these hybrid/control varieties maximum tuber yield (32.52 t/ha and 37.97 t/ha) under hybrid AICRP-P-46 at 75 and 90 days harvest was noted which was closely followed by AICRP-P-45.

- Four hybrids viz., AICRP-P-60, AICRP-P-61, AICRP-P-57 and AICRP-P-58, along with six control varieties ie AICRP-C-1, AICRP-C-8, AICRP-C-10, AICRP-PH-3, AICRP-C-11 and AICRP-P-4 were evaluated at Faizabad (Ayodhya) centre and out of these ten hybrids/

control varieties hybrid AICRP-P-61 recorded maximum tuber yield (25.49 t/ha and 29.96 t/ha) at 75 and 90 days crop as compared to rest hybrid/control varieties. However, it was closely followed by AICRP-P-58 and AICRP-P-60.

- Two hybrids viz., AICRP-P-42 and AICRP-P-48 along with four control varieties, K. Surya, K. Khyati, K. Pukhraj and K Lalima were evaluated at Faizabad (Ayodhya) centre and out of these hybrid/ control varieties hybrid AICRP-P-48 recorded maximum tuber yield (20.09 t/ha, 33.47 t/ha and 40.79 t/ha) at 60, 75 and 90 days crop as compared to rest hybrid/control varieties.

- Five hybrids/ cultivars AICRP-P-59, AICRP-P-21, K. Sindhuri, K. Pukharaj and K. Ganga were tested two irrigation schedules viz., No water stress and Defcirt water at Faizabad (Ayodhya) centre. Thus ten treatment combinations were tried in factorial experiment in randomized block design. Yield of tuber with No water stress was significantly superior to Defcirt water plots. However, hybrid AICRP-P-59 and AICRP-P-21 recoded almost similar yield in both No water stress and Defcirt water conditions.



View of experiment on Potato

Fenugreek:

- 204 germplasm of fenugreek were maintained and evaluated at stations. The highest



yield was found in NDM-49 (6.1 g/plant) followed by NDM-45 (5.7 g/plant), NDM-51 (5.7 g/plant) and NDM-42 (5.6 g/plant).

- Total 17 entries of fenugreek were tested in CVT and recorded maximum yield in FGK-123 (15.83 q/ha) followed by FGK-128 (15.07 q/ha) and FGK-122 (14.72 q/ha).
- Under IET of Fenugreek, total 11 entries were tested and found maximum yield in NDM-119 (18.26 q/ha) followed NDM-36 (17.84 q/ha) and NDM-137 (17.29 q/ha).

Fennel:

- Total 168 germplasm of Fennel were evaluated and recorded maximum yield in NDF-46 (52 g/plant) followed by NDF-52 (51.9 g/plant) and NDF-49 (50.4 g/plant).
- Total 14 entries of fennel were tested in CVT and recorded maximum yield in FNL-125 (14.32 q/ha) followed by FNL-123 (13.66 q/ha) and FNL-121 (13.39 q/ha).
- Under IET of fennel total 11 entries were tested and found maximum yield in NDF-59 (14.72 q/ha) followed NDF-46 (13.96 q/ha) and NDF-45 (13.47 q/ha).

Black Cumin:

- Total 37 germplasm of BLACK CUMIN were evaluated, the maximum yield was recorded NDBC-20 (9.1 g/plant) followed by NDBC-7 (9 g/plant) and NDBC-11 (8.9 g/plant).
- Total 9 entries of black cumin were tested in CVT and NDBC-11 (8.71 q/ha) recorded maximum yield followed by PK-3 (7.62 q/ha) and AN-9 (7.15 q/ha) and HKL-12 (7.15 q/ha.)

Azowain:

- Total 44 germplasm of Azowain were evaluated and maximum yield was recorded in NDAJ-21 (9.5 g/plant) followed by NDAJ-30 (9.0 g/plant), NDAJ-34 (9 g/plant) NDAJ-20 (8.6 g/plant).
- Total 10 entries of Azowain were tested in CVT and maximum yield was recorded in NDAJ-30 (8.37 q/ha) followed by HAJ-54 (8.10 q/ha) and

JA-18-05 (7.89 q/ha).

Arid Zone Fruits:

Crop Improvement:

Advance lines:

Aonla: NA-25, NA-26, NA-27, NA-29, NA-32, NA-33, NA-34 and NA-35 (NA-33, 34 and NA-35 planted during 2018)

Bael: (ND/AH, 9, 10, 11, 12, 16, 17, 21, 22, 25, 26, 27 and NB-19, 21, 22, 23 and (NB-26 planted during 2017)

Ber: Narendra Ber Sel. 9, 10, 11, 12, 13, 14, 15 and Narendra Ber Sel-16

Jamun: NJ-6, 7, 8 and NJ-9

Lines identified for specific characters:

Narendra Bael 21 for precocity bearing characters

AGROFORESTRY:

- As per paddy-mustard based sequence, significantly higher grain yield of paddy variety Sarjoo-52 (1.93 t ha⁻¹) and mustard variety Kranti (1.32 t ha⁻¹) was achieved as compared to other varieties of paddy and mustard under Dalbergiasissoobased agri-silviculture system.
- The maximum Urd grain yield of variety Narendra Urd-1 (0.42 t ha⁻¹) was found significantly superior over other varieties of Urd under Dalbergiasissoobased agri-silviculture system.
- As per organic fertilizers based experimentation, the maximum grain yield of paddy var. Sarjoo-52 (1.94 t ha⁻¹) with the application of FYM 10 t ha⁻¹ and wheat var. Kundan (1.91 t ha⁻¹) was recorded under Dalbergiasissoobased agri-silviculture system.
- Significantly higher rhizome yield (5.83 t ha⁻¹ yr⁻¹) of turmeric was obtained with application of 50% recommended dose of NPK (120:80:80 kg ha⁻¹) + 50% FYM dose (recommended dose 20 t ha⁻¹) as compared to other treatments under agri-silvi-

horti system.

- In the Dalbergiasissoo based silvi-pastoral system, the maximum green fodder yield was found with *Pennisetumpurpureum* (43.24 t ha^{-1}), followed by *Panicum maximum* (31.12 t ha^{-1}) and *Brachiarumutica* (29.06 t ha^{-1}).
- Under Eucalyptus based agroforestry system for Indo-gangetic plains, the maximum plant height (6.10 m) and dbh (8.17 cm) were recorded under treatment (Moong-Wheat) as compared to other treatments.
- Under tree improvement project of shisham, from growth performance, PS-52 showed highest plant height (2.25 m) followed by PS-54 and L-3 (1.86 m). Higher collar diameter (3.11 cm) also recorded in same clone PS-52. The maximum number of branches (22) counted in PS-52, PS-90 and L3 clones. The higher crown spread (71.4 cm) was measured in PS-52 followed by PS-20 (58.5 cm).
- Under Eucalyptus based agroforestry system for Indo-gangetic plains, for plant growth performance, the maximum tree height (6.10 m) and collar diameter (8.17 cm), number of branches (34) and crown spread (126 cm) was recorded in (Moong-Wheat) system. The maximum Moong grain yield (0.32 t ha^{-1}) as kharif intercrop was obtained (Moong-Wheat) system as compared to Moong-Mustard system (0.27 t ha^{-1}). The higher Wheat grain yield as rabi intercrop (1.78 t ha^{-1}) was recorded in (Moong-Wheat) system as compared to (Urd-Wheat) system (1.67 t ha^{-1}).

MEDICINAL & AROMATIC PLANTS:

Crop Improvement:

Advanced lines developed:

1. Sataver- ND Satavari- 101, ND Satavari-102
2. Aloe vera- ND Aloe- 14, ND Aloe-17

Evaluation of germplasm of Aloe vera (ST):

The 25 germplasm including Faizabad Local check of Aloe vera were evaluated in 2019-2020 with two replications. Out of which the highest leaf recorded in germplasm IC-310596

(79792 Kg/ha) followed by the genotype IC-285629 (69343 Kg/ha) as compared to rest of the germplasm in the experiment.

Evaluation of germplasm of Isabgole (ST):

The 30 germplasm including check of Isabgole were evaluated in 2019-20 with two replications Out of which the highest seed yield recorded in germplasm HI-31 (923.57 Kg/ha) followed by MIB-2 (864.56 Kg/ha) as compare to rest of the germplasm in the experiment.

Evaluation of germplasm of Opium poppy (ST):

The 36 germplasm including check of opium poppy were evaluated in 2019-20 with two replications Out of which the highest number of capsules /plant recorded in germplasm ND-8 (2.25) followed by ND-17 (2.20) as compared to the rest of the germplasm.

Crop Production:

- The widest plant spacing of 60cm x 60 cm recorded higher leaf yield of aloe vera as compared to 60 cm x 45 cm plant spacing. Maximum leaf yield was recorded with application of 20 t FYM ha^{-1} .
- The closest plant spacing of 60 cm x 45 cm produced significantly more fresh as well as dry herbage yield followed by 60 cm x 60 cm and 75 cm x 60 cm. More herbage yield was noted in plots receiving 12 t FYM ha^{-1} .
- The closest plant spacing of 30 cm x 10 cm produced significantly more seed yield of Isabgole followed by 30cm x15 cm and 30cm x 20 cm. Maximum seed yield was recorded with application of 20 t FYM ha^{-1} .
- The maximum seed yield of Asalio was noted with RDF: 60:40:30 Kg NPK ha^{-1} followed by 5 t Vermicompost ha^{-1} .



Seed Produced During 2019-20, following quantity of seed of different crops were produced :

Nucleus Seed:

Crop	Variety	Production (q)
Rice	BPT-5204	0.6
	NDR-3112-1	0.25
	Swarna Sub -1	0.95
	NDR-8002	0.19
	NDR-2064	1.25
	NDR-2065	0.85
	Sarju-52	2.25
	NDR-359	0.16
	NDR-97	0.85
Wheat	HD-2967	5
	NW-5054	2
	NW-1-14	2
Mungbean	NDM-1	0.45
Urdbean	NDU-1	0.35
Lentil	NDL-1	0.55
Pigeonpea	NDA-2	0.6

Seed Produced during Kharif 2019 and Zaid 2020

S.No.	Crop/ Variety	Production (q)			Total Production (q)
		Breeder Seed	Foundation Seed	Certified Seed	
	Rice				
1	Sambha sub-1	76.5	613.2	-	689.7
2	NDR-2065	41.4	772.2	-	813.6
3	NDR-2064	8.54	534.9	-	543.44
4	Swarna sub-1	-	-	90	90
5	Beena-11	-	18.9	-	18.9
6	MTU-7029	-	58.8	-	58.8
7	BPT-5204	16.08	249	-	265.08
8	Narendra Lalmati	2.05	-	-	2.05
9	NDR-97	2.41	6.3	-	8.71
10	Sarju-52	80.1	15.9	-	96
11	NDR3112-1 (Prakhar)	6.45	37.8	-	44.25
12	Sushk Samrat	2.2	-	-	2.2
13	NDR-8002	8.4	-	-	8.4
	Total :	244.13	2307	90	2641.13
1	Pigeonpea				
	NDA-2	3.15	97.18	-	100.33
	Total :	3.15	97.18		100.33
	Mungbean				
1	NDM-1	1.03	2.5	-	3.53
2	IPM2-3	-	0.48	-	0.48
	Total	1.03	2.98		4.01
	Urdbean				
3	NDU-1	0.75	2.15	-	2.9
	Shekhar	1.44	0.42	-	1.82
	Total	2.19	2.57		4.76
	G. Total :	250.5	2409.73	90	2750.23

Seed Produced during *Rabi* 2019- 20

S. N.	Crop/ Variety	Production (q)			Total Production (q)
		Breeder Seed	Foundation Seed	Certified Seed	
	Wheat				
1	NW -1014	15	-	-	15
2	PBW- 154	43.2	-	-	43.2
3	K 1317	-	22	-	22
4	HD -2967	102	1508.12	-	1610.12
5	WB 2	-	22.2	-	22.2
6	PBW- 550	9.6	125.05	-	134.65
7	NW -5054	14.4	228.25	45	287.65
8	DBW- 107	-	14.4	-	14.4
9	DBW 17	18	-	-	18
10	DBW 252	-	159.6	-	159.6
11	DBW 187	-	67.2	-	67.2
12	HD -3086	-	199	-	199
Total :		202.2	2345.82	45	2593.02
	Barley				
1	NDB 1445		10.95		10.95
2	NB 2	-	-	9.2	9.2
Total :			10.95	9.2	20.15
	Lentil				
1	KLS 122		12.65	-	12.65
2	NDL 1	10	84.82	-	94.82
Total :		10	97.47		107.47
	Rai				
1	Pitambari	1.7	-	-	1.7
2	NDR 8501	14.5	22.82	-	37.32
Total :		16.2	22.82		39.02
	Pea				
1	Rachna	-	3.5	-	3.5
Total :			3.5		3.5
	Gram				
1	JG 14	-	1.02	-	1.02
2	KWR 108	-	1.1	-	1.1
3	Pusa 362	-	24.7	-	24.7
Total :			26.82		26.82
Grand Total :		228.4	2507.38	54.2	2789.98



FRONT LINE DEMONSTRATION (FLD)

Rice :

S.No.	Technology demonstrated	% Increased in yield over farmers' Practice	No of Demonstration
	New Rice varieties	20-25 %	25 ha

● FLD on Improved rice varieties Narendra Sona, NDR 2101 and Sambha Sub-1 was conducted in Ayodhya, Gonda and Azamgarh districts of eastern Uttar Pradesh (25 ha).

● In all the locations improved rice varieties out yielded farmers own varieties with 20-25% more yield.

S.No.	Technology demonstrated	% increase in yield over farmer practice	No. of demonstration
	Wheat		
1	Newly Released Varieties	20- 25	15
2	Sowing Technology	15- 20	3
	Barley		
1	Newly Released Varieties	15-20	7
2	Sowing Technology	15-Oct	5

Forage Crops :

S.No.	Technology demonstrated	% increase in yield over farmer practices	No. of demonstration
1	Bajra(NDFB-2)	22-26	5
2	Oat(NDO-1)	25-30	10

SUCCESS STORY

Changes made in existing IFS practised by farmers and additional cost (Rs) (Mean of 5 households if applicable)

Existing System				Changes made	Cost of intervention (Rs)
Module	Details	Cost (Rs)	Net income (Rs)		
Cropping systems	Rice	16539	21402	Rice –Sarju-52 (150:60:60:25)	5985
	Wheat			Wheat- PBW-343 (150:60:60:25)	
	Berseem			Berseem- Vardan (20:80) N:P	
	Gram			Gram – Uday	
	Moong			Moong – NDM-1	
				Recommended dose of Fertilizer	
Livestock	Buffalo (Local)	15600	22649	Mineral mixture, Albendazol Tablet for Dewarming	4758
Product diversification					
Optional					
Total :		32139	44051		10743



Visit of experiments by Hon'ble Vice-chancellor



Interaction with farmers at MES

Visit of potato experiment by Monitoring team (AICRP-Potato)



Dr. Shahid Ahmad & Dr. A. K. Dixit, IGFRI, Jhansi visited & monitored Rabi forage experiments on Feb 3, 2020



Dr. N. Bhardwaj and Dr. S. Chandra AICRP on Forage Crops, IGFRI, Jhansi visited & monitored Kharif forage experiments on 27-28.09.2019

EXTENSION



DIRECTORATE OF EXTENSION

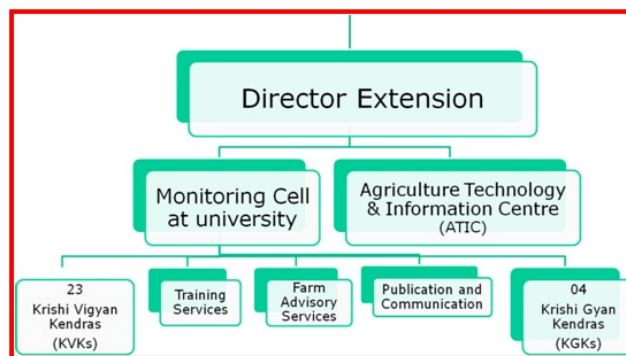
The University has the challenging responsibility of agriculture and rural development for the 26 districts of Eastern Uttar Pradesh, which is the area of responsibility of the University. Increasing population pressure play a vital role in the fragmentation and subdivisions of land holding resulting in average land holding of about 0.8 ha per family. Lack of resources, poor economic condition and low literacy rate are the major bottlenecks in promoting the speedy transfer of viable technologies. Directorate has to coordinate, planning, execution and monitoring of various extension programmes in collaboration with different research units of the university, state departments, ICAR, NGOs, Government of India and other agencies related with the development of Agriculture.

The main objective of Directorate of Extension is to conduct extension activities through its KVKs in each district viz., capacity development of all stakeholders including farmers in different agro-eco situations, to assess and refine the latest agricultural technologies through on farm trials for location specific applications, to demonstrate the improved technology on the farmer's fields to disseminate the latest technological innovations through farm advisory to get feedback for strengthening research and to provide farm information services through various extension activities.

Infrastructure and facilities:

- Agricultural Technology Information Centre (ATIC) including museum.
- Training hall at Directorate with 100 seats
- Farmers' Hostel with rooms and dining hall (100 accommodations)
- Training cum Demonstration farm
- Training halls and farmers hostel at all KVKs under jurisdiction

Organizational structure and staff positions



Formation and Function of the University Extension Advisory Council

In order to administer the overall extension function, there remains a provision of forming a Extension Advisory Council by the University. The Extension Advisory Council of the University is a Statutory and policy making body on agricultural extension in the University consisting of the Vice Chancellor as Chairman, the Director of Extension as Secretary with a good number of external and internal members. The Extension Advisory Council is to meet to review the extension activities, discuss and finalize the policy issues on extension.

Functions:

- To supervise, direct and control all



extension activities of the University

- To draw and approve the extension activities and training programmes for execution through extension wings and Kriishi Vigyan Kendras and to review and monitor the extension activities of the University

- To consider and review the financial requirements for extension programmes and review extension activities of the University.

- To approve proposal on different plans and measures for improvement and promotion of extension activities and training programmes maintained by the University.

- To make provisions for the publication of

extension news-letters, bulletins, and periodicals from time to time for providing updated knowledge on technology development in agriculture and allied sciences to the farmer community.

Scientific Advisory Committee (SAC)

Meetings:

The Scientific Advisory Committee meetings are conducted once in a year to develop need based and problem oriented effective technical programme, annual action plan, and review of activities and guidance/suggestions and to improve the functioning of KVK activities.

Composition of the SAC

1	Head of Host university/institute	Chairman/Chairperson
2	Director Extension of concerned SAU	Member
3	Director, ATARI of the concerned Zone	Member
4	Representative of ICAR institute/ICAR Regional Research Station if located in the District or nearby	Member
5	Associate Director Research & Extension of the Zonal Research Station in which KVK is located	Member
6	District officers of the line departments such as Agriculture, Horticulture, Animal Husbandry, Soil Conservation, Sericulture, Fisheries, Irrigation, Social welfare, small scale industries etc	Member
7	Representative of the lead bank of the district	Member
8	Farm Radio Officer of the AIR in which KVK is located	Member
9	Representative of Doordarshan Centre in which KVK is located	Member
10	Two Representatives of the farmers one small and one big nominated by the Head of host institution/university	Member
11	Two Representatives of the farm women nominated by the Head of host institution/university	Member
12	Senior Scientist & Head	Member Secretary

SAC Meetings held in the year 2019-20

Name of KVK	Date
Amethi	05.11.2019
Ayodhya	12.09.2019
Bahraich I	25.01.2020
Bahraich II	20.11.2019
Basti	11.09.2019
Chandauli	02.02.2020
Ghazipur I	25.02.2020
Gonda I	16.12.2019
Gonda II	31.01.2020
Gorakhpur II	13.02.2020
Sant Kabir Nagar	19.03.2020
Siddharthnagar	16.03.2020
Sonbhadra	03.02.2020
Sultanpur II	30.01.2020
Varanasi	25.02.2020



Meeting of Scientific Advisory Committee

Agricultural Technology Information Centre (ATIC)

Agricultural Technology Information Centre (ATIC) was established in 2001 at ANDUAT, Ayodhya. The extension activities like field visits, reply of the queries of the farmers and other stakeholders, diagnostic services in coordination with the other departments of University are being performed by the ATIC. Besides, the seed and seedlings, processed products and publications are also sold through ATIC to the endusers. Helpline and Kisan Call Centres are functioning in this centre for solving the problems of the farmers.

Objectives

The main objective is to help farmers and other stake holders such as farmer-entrepreneurs, extension workers, development agencies, non-government agencies (NGOs) and private sector organizations to providing solutions to their location- specific problems in agriculture and make available all the technological information along with technology inputs and products for testing and use by them.

Diagnostic and Advisory service

- Diagnosis of plants/crops problem
- Management of field problems
- Analysis of soil samples
- First hand information to approaching farmers

Helpline Service/Kisan Call Centre

Advising farmers for problems through helpline service 02426-243861 and Kisan Call Centre (Toll free 1800 180 1551).

ATIC is also connected with farmers for on-line solutions



(ii.) KRISHI GYAN KENDRAS (KGKs)

S.No.	District	Address
1	Deoria	Krishi Gyan Kendra, Kalawati Kunj, 9/175 Sindhi Colony, Deoria, Pin 274 001
2	Amethi	Krishi Gyan Kendra, PO Gauriganj, Opposite Kotwali, Amethi, Pin 227 407
3	Gonda	Krishi Gyan Kendra, Civil Lines, Gonda, Pin 271 001
4	Ghazipur	Krishi Gyan Kendra, Badi Bagh, Ghazipur, Pin 233 001

Year of Establishment

Year of Establishment	Name of KVKs
1982	Directorate of Extension Estd.
1985	Bahraich and Basti
1989	Ballia and Mau
1990	Varanasi
1992	Siddharth Nagar
2004	Gorakhpur, Barabanki, Mahrajganj, Faizabad, Sonbhadra and Azamgarh
2005	Balrampur, Jaunpur and Chandauli
2009	Santkabir Nagar
2011	Ambedkar Nagar
2018	Amethi, Gonda, BahraichII, JaunpurII, Ghazipur II, SultanpurII
KGK	Deoria, Ghazipur, Gauriganj and Gonda
Total	27 (23 KVK + 4 KGK)

Vision

Science and technology-led growth leading to enhanced productivity, profitability and sustainability of agriculture.

Mission

Farmer-centric growth in agriculture and allied sectors through application of appropriate technologies in specific agro-

ecosystem perspective.

Mandate of KVKs:

- The mandate of KVK is Technology Assessment and Demonstration for its Application and Capacity Development.

Activities of KVK:

- To conduct ON Farm Testing (OFT) to identify agricultural technologies in term of location specific sustainable land use system under various farming situation.
- To organize short and long term vocational training in agriculture and other vocations for the practising farmers, farm women and rural youths for higher production and generating self-employment.
- To organize Front Line Demonstration on various crops to generate production data and feedback information.
- To organize training to update extension personnel on frontiers in agricultural research and development on regular basis.
- To produce and supply quality seeds and planting materials for farming community along with organization of various extension activities to disseminate technology across the system.

Beside these KVK works as a knowledge and resource centre of agriculture technologies for supporting farmers in improving their agricultural production and livelihood.

Characterization and thrust areas of Agro-climatic zones

Agro-climatic Zone/KVKs & KGKs	Characteristics	Thrust Areas
North Eastern Plain Zone <i>(KVKs: Bahraich, Basti, Siddharthnagar, Gorakhpur, Mahrajganj, Balrampur, Shravasti, Sant Kabirnagar and Gonda)</i> <i>KGKs: Deoria and Gonda)</i>	<ul style="list-style-type: none"> Flood prone, water logged, deep alluvium, Zn, S & B Rice-wheat dominant system Average Rainfall 1200 mm 	<ul style="list-style-type: none"> Management of lowland/ flood prone areas Intensive/multiple cropping Diversification of the existing cropping system. Integrated farming systems Promotion for mango, banana and litchi Fishery & poultry
Eastern Plain Zone <i>(KVKs: Mau, Ballia, Varanasi, Ayodhya, Azamgarh, Barabanki, Jaunpur, Chandauli, Ambedkarnagar, Amethi and Sultanpur)</i> <i>KGKs Amethi & Ghazipur)</i>	<ul style="list-style-type: none"> Light alluvial, sodicity, Zn, S & Fe deficiency in soils Rice-wheat dominant system Average Rainfall 1050 mm 	<ul style="list-style-type: none"> Management of sodic soils Integrated farming Intensification & diversification of cropping system Livestock management. Promotion for aonla cultivation Encouragement for hybrid vegetable production Fish-culture
Vindhyan Zone <i>(KVK: Sonbhadra)</i>	<ul style="list-style-type: none"> Stress situation Erratic rainfall Clay & red laterite soil Undulated topography with bushy forest cover Rainfall 850 mm 	<ul style="list-style-type: none"> Rainfed farming Water harvesting & watershed management Management of rocky & undulated land Agro-forestry and medicinal plants Utilization of tribal's' potential



Sources of Funds and involvement of KVKs and KGKs

S. No.	Funding Agencies/ Organizations	Programs/Projects
1	Indian Council of Agricultural Research (ICAR)	Agricultural Technology Information Centre (ATIC) Krishi Vigyan Kendra - 23 Crop Residue Management Project – 07 KVKs Tribal Sub Plan – 03 KVKs Schedule Caste Sub Plan – 03 KVKs ARYA project – 03 KVKs NARI project – 01 KVK NASF-ICT (ICAR) – 01 KVK
2	Indian Agriculture Research Institute (IARI)	IARI-Kalanamak – 01 KVK
3	CRIDA, Hyderabad	National Innovations on Climatic Resilient Agriculture (NICRA) project – 04 KVKs
4	Indian Meteorological Department, Government of India	District Agro-Meteorology Unit project - 07 KVKs
5	CIMMYT, India	CSISA project – 17 KVKs
6	Rastriya Krishi Vikas Yojana under Department of Agriculture	Strengthening of KVKs Tribal development
7	University Resources	Farmers Fair / Exhibition, Publication
8	Government of Uttar Pradesh	Krishi Gyan Kendras – 04 T & V Programme – Headquarter Transfer of Technology (TOT) – Headquarter Farmers Help Line Services –ATIC, Headquarter Farmers Scientist Interaction – Head quarter Center of Excellence – 06 KVKs Doubling Farmers Income – 05 KVKs

Special programmes conducted at different KVKs

Crop Residue Management (CRM)

- Operating at 07 KVKs namely Azamgarh, Jaunpur, Varanasi, Siddharth Nagar Barabanki, Mahrajganj and Chandauli.
- Equipments like happy seeder, reversible MB plough, residue chopper cum shredder has been purchased and are being utilized by KVKs.
- **National Innovations on crop resilient agriculture (NICRA)** at 04 KVK namely Sonbhadra, Gorakhpur, Mahrajganj and Bahraich.

Major extension activities (2019-20)

Summarized view of ATIC activities

University is producing a large number of technological products in the form of seed, plant sapling of vegetables, horticultural, forestry, flowers, vermi-compost, animal feeds, value added products from fruit, milk and crop produces, small implements etc. All these products are being sold to the stakeholders in the ATIC at a reasonable

- **District Agro-metrology unit (DAMU)** at 07 KVKs namely Balrampur, Gorakhpur, Azamgarh, Chndauli, Jaunpur I, Sonbhadra and Siddharth Nagar.
- **CSISA project funded by CIMMYT** is operational at 18 KVKs except Gonda II, Bahraich I & II, Jaunpur II and Sonebhadra.
- **Tribal Sub-plan** at 03 KVK namely Balrampur, Nanpara and Sonbhadra.
- **Schedule caste Sub Plan** at 03 KVKs namely Ayodhya, Chandauli and Sonbhadra

price. ATIC also provides various technology products to the farming community in form of books, technical bulletins, mini kit, quality seed of frontier varieties, agriculture diary etc. A number of farmers contact ATIC through letters and telephone for getting solutions to their problems related their crops, livestock, etc. The reply of the queries of the farmers are provided regularly either through letters or telephone.

S. No.	Technology Products Sold	No. /Quantity	Value (Rs.)
1	Technical bulletin	1423	25811
2	Poorvanchal Kheti	12000	220000
3	Agriculture Diary	3000	360000
4	Paddy seed (Qt)	312	624000
5	Wheat (Qt)	295	744875
	Total		1974686



Human Resource Management Training

The Directorate of Extension is organizing refresher/training courses on the latest production technologies and management. These training programmes help the extension personnel by

augmenting their knowledge and skill competencies to enable them to serve better their clients – the farmers.

The following trainings were organized by Directorate of Extension.

Human Resource Training conducted by Directorate of Extension

S.No.	Title	Clientele (KVKs)	Participants (No.)	Date
1	Crop residue management	SMSs	23	Jan 28-29, 2020
2	Cultivation of horticultural crops and post harvest management	SMSs	22	Feb 4-5, 2020
3	Animal based integrated farming system	SMSs	24	Feb 10-11, 2020
4	Modern scenario of pest management	SMSs	23	Feb 17-18, 2020

Workshop/ Meeting organized

S.No.	Details of workshop/meeting conducted	No. of Meetings	No. of participants	Date
1	Pre Zonal workshop revue meeting	1	23	July 8-9, 2019
2	Mid Term Workshop	1	53	Nov. 25-26, 2019



HRD Training

26th Annual Zonal Workshop of KVKs of Uttar Pradesh organized at University

- The ICAR-Agricultural Technology Application Research Institute, Kanpur organized the 26th Annual Zonal Workshop of Krishi Vigyan Kendras of Uttar Pradesh at Acharya Narendra Deva University of Agriculture and Technology, Kumarganj, Ayodhya from 8th to 9th July, 2019. Shri Yogi Adityanath, Chief Minister of Uttar Pradesh inaugurated the Workshop on 8th July, 2019.

- The Chief Minister advocated and called the agricultural scientists for doubling income of the farmers' upto the year - 2022.

- He urged the scientists to prepare projects for financial assistance from Government of India schemes.

- The Chief Minister also highlighted the significance for Goshala's establishment to enhance the use of dung as FYM, development of grey sectors like Animal Husbandry, Fisheries, Horticulture and the related advance technologies for fodder production.

- Dr. A.K. Singh, Deputy Director General (Agricultural Extension), ICAR, New Delhi stated about the Government's new schemes for the benefit of the farmers. Dr. Singh urged the Krishi Vigyan Kendras to transfer the technologies to the farmers in a faster way, effective execution of the Krishi Kalyan Abhiyan at the remote districts, popularize the climate smart and water smart short duration crop varieties, zero budget farming, input dealer training, IFS model at KVKs and effective use of the established seed hub on Pulses, etc. He accentuated on using the ICT tools,

viz., m-Kisan, Training for Extension Personnel and skill and entrepreneurship development among the rural youth.

- Dr. J.S. Sandhu, Vice Chancellor of the University stated about the recognition of KVKs' works at the national and state levels. He urged the KVKs for sustaining their hard work. Dr. Sandhu applauded the Chief Minister's initiative to extend the financial support to the selected KVKs of the States to strengthen their infrastructure facilities.

- Shri Surya Pratap Shahi, Minister of

Agriculture, Agricultural Education and Research, Government of Uttar Pradesh lauded the KVK's work and urged the scientists to stay at KVK in order to solve the problems of farming community. Shri Shahi emphasized on the use of low external input and more production and the IFS models, drip and sprinkler irrigation, etc.



Glimpses of Zonal workshop



Glimpses of Zonal workshop

Review meeting with Cabinet Minister Agriculture, Government of Uttar Pradesh

The Cabinet Minister for Agriculture, Govt of Uttar Pradesh Sri Surya Pratap Shahi Ji took a review meeting of the progress of teaching, research and extension activities of the university on 31st May and 01st June, 2019 at University headquarter. During the meeting, Agriculture Minister emphasized on enhancing the reach of technologies amongst farmersthrough the network

of Research Stations and Krishi Vigyan Kendras (KVKs). He also emphasized that seed is the prime inputan ddirected for preparing a roadmap for seed availability.

The Director General of Uttar Pradesh Council of Agriculture Research, Dr. Bijendra Singh, Deans and Directors of the University also presented in the review meeting and gave valuable suggestions to improve the productivity and efficiency of the variouscolleges, research centres



and KVKs of the university. The Director Extension presented the progress portrait of seed production, project implementation of RKVY and other flagship programmes etc. Research activities were presented by Director Research.

Dr. O.P. Singh, Ex-Director Extension, SVPUAT, Meerut; Dr. Y.P.S. Dabas, Ex-Director Extension, G.B.P.U.A.T., Pantnagar; Dr. Sadhana Pandey, Principal Scientist, ICAR-ATARI, Kanpur and Dr. S.R.K. Singh, Principal Scientist, ICAR-ATARI, Jabalpur.

- QRT team also visited selected three KVKs namely Gonda, Basti and Barabanki and also visited farmers' field and interacted with the farmers of the region.



Hon'ble Minister during review meeting

QRT Visit of KVKs

• In the beginning, Honourable Vice Chancellor Dr. Bijendra Singh welcomed the QRT members and also chaired the introductory session of the meeting. Achievements and progress of KVKs were presented by Heads of KVKs. The presentations were critically reviewed by QRT members and various recommendations were given by honorable members.

• Quinquennial Review Team meeting was held at University headquarter during 03 – 06 December, 2019. The committee was chaired by Dr. Gaya Prasad, Ex-Vice Chancellor SVPUAT, Meerut. The committee members comprised Dr. Ramchandra, Ex-ADG, ICAR, New Delhi; Dr. Mathura Rai, Ex-Director, ICAR-IIVR, Varanasi;



Hon'ble Minister during review meeting

District Agro Metrology Unit (DAMU)

District Agro Meteorology Unit (DAMU) has been established in seven Krishi Vigyan Kendra i.e. Sonbhadra, Gorakhpur, Jaunpur, Azamgarh, Siddharthnagar, Balrampur and Chandauli with the help and co-operation of Indian Meteorological Department New Delhi. This project is being implemented by setting up of weather stations in KVKs, a scientist and observer will separately be appointed for functioning this station. Farmers of the district will be benefitted by information given by Scientists, DAMU.

Establishment of Center of Excellence

Government of Uttar Pradesh has selected KVK Balrampur, Gorakhpur, Varanasi, Mau, Sonbhadra and Chandauli to establish Centers of Excellence in three agro-ecological region of eastern Uttar Pradesh. In North Eastern Plain Zone, KVK Balrampur as center of excellence on Fisheries based IFS model with budget outlay of Rs. 119.00 lakh and KVK, Belipar Gorakhpur as center of excellence on litchi, guava and mango production, processing and value addition, worth of Rs. 101.11 lakh. Under Eastern Plain Zone KVK Varanasi as center of excellence on Vegetable processing and value addition, worth of Rs. 161.00 lakh and KVK Mau as center of excellence on Paddy and wheat crop diversification, worth of Rs 117.70 lakh. Whereas, in Vindhayan Zone KVK, Sonbhadra will be developed as center of excellence on Dry land Horticulture and coarse cereals, worth Rs 107.64 lakh and KVK Chandauli will be developed as center of excellence on Aonla, minor fruits and medicinal plants, worth of Rs. 168.18 lakh. A total outlay of of Rs. 774.63 lakh have been sanctioned from State Government to establish six center of excellence under ANDUAT.

In Situ Crop Residue Management (CRM)

Ministry of Agriculture & Farmers Welfare, GOI, has announced and implemented 100 percent Central Government shared scheme i.e. "In Situ management of crop residues" at those

districts where residue burning occurs in large areas. Under this scheme, seven KVKs namely Azamgarh, Jaunpur, Varanasi, Chandauli, Maharajganj and Siddharthnagar have been selected. In order to promote crop residue management, farmers fare and agriculture exhibitions, trainings, awareness programme and wall paintings, mobilization of school childrens etc., extension activities was conducted under the project. Various crop residue implements like happy seeder, super seeder, mulcher, rotavator, reversible MB plough and zero tillage machines were also provided at KVKs for demonstration on farmers' fields.

Construction of Administrative Buildings at KVKs

ICAR and State Government sanctioned 08 new KVKs to this University. Among them, three KVKs namely Amethi, Bahraich II and Gonda II have received budget from ICAR for the construction of administrative building. The construction agencies were nominated by State Government for construction which is in progress.

Construction of boundary wall

State Government took initiative to strengthen KVKs of the state and provided funds to seven KVKs namely Ayodhya, Basti, Bahraich, Barabanki, Gorakhpur, Siddharthnagar and Varanasi under *Rastriya Krishi Vikas Yojna* (RKVY). The major works proposed are reconstruction of boundary wall, approach road and solar street light of KVK farms with the budget outlay of Rs 1124.00 lacs. Construction of boundary wall and respective works are in progress at each proposed KVK.

Other infrastructure development through RKVY

A project to obtain financial assistance for various infrastructural facilities at 7 KVKs was also submitted in RKVY. Under this, farmers' hostel cum training hall, threshing floor, implement shed, tube-well, entrance gate, ponds, CC road, solar system, sprinkler system, farm



machinery and publicity van will be established at 07 KVKs. Various units like poly house, mother orchard, vermi, honey bee, Azola/ BGA, museum, fishery, duckery, poultry units will also be established at KVK premises through RKVY.

Mango and Jamun Sangosthi Organized

Directorate of Extension and College of Horticulture and Agroforestry jointly organized a mega-Sangosthi on Mango and Jamun (Java plum or Indian blackberry) on 02nd July, 2019. Mango and Jamun growers of eastern Uttar Pradesh participated in the exhibition organized at University campus. More than 100 varieties of mangoes and 30 genotypes of jamun were exhibited. Gosthi was also organized and emphasis of mango and jamun cultivation and their importance in human food was discussed. Dr. J. S. Sandhu, Vice Chancellor of the University, speaking as Chief Guest, stressed on the need of conserving mango and jamun genotypes and cultivars for further research works. He urged growers to conserve their cultivars as there is huge market for such products. Farmers must use latest technologies in the field of processing and value addition and adopt cluster approach so that farmers' groups can market the produce in cooperative mode. Growers of eastern Uttar Pradesh exhibited their cultivars of mango and jamun fruits which was reviewed by high level committee of University. To conserving mango and jamun cultivars and genotypes, growers were motivated and appreciation certificates were also distributed to all of them. More than 2,000 farmers and farm women participated in the programme.



Glimpses of Kisan Mela

KVK Activities

Training Programmes

The Directorate of Extension, through its KVKs, imparted 2727 trainings to the farmers, rural youth, extensionfunctionaries and scientists. These KVKs conducted capacity building programmesto 45101 farmers, 9619 rural youths and 4534 extensionfunctionaries. Besides this, the KVKs also organized 87 sponsored trainings for 5593 beneficiaries of other agenciesand 157 vocational trainings for 3388 potential entrepreneurs.

Clientele	No. of Courses	Total participants
Farmers & farm women	1957	45101
Rural youths	343	9619
Extension functionaries	183	4534
Sponsored Training	87	5593
Vocational Training	157	3388
Total	2727	68235

Frontline demonstrations

Frontline demonstration (FLD) is one of the important activities of KVKs. It shows the production potential of improved technologies to the farmers. KVKs played important role to promote the latest varieties and technologies

related to cereals, oilseeds, pulses, vegetables, fruits, etc. to enhance the production and productivity. Technology demonstrations on pulses were organized on an area of 402.80 ha involving 1281 farmers and on oilseeds on an area of 223.0 ha involving 636 farmers.

Details of the Demonstration organized by KVKs in 2019-20

Enterprise	No. of Farmers	Area (ha)	Units/Animals
Oilseeds	636	223	-
Pulses	1281	402.8	-
Cereals	874	341.2	-
Farm implements	429	110	-
Other Crops (Vegetable, Fodder)	232	20.64	-
Hybrid crops	88	28	-
Total	749	158.64	-
Livestock & Fisheries	188		423
Other enterprises (Mushroom Production, Value addition, Kitchen Garden, Drudgery reduction, Farm Machinery)	50		50
Total	238		473
Grand Total	3778	1125.64	473

Technology Assessment

KVKs of University are performing on-farm testing to identify the location specificity of agricultural technologies under various farming

systems. Total 126 technologies were assessed and 681 trials conducted under three categories namely, crop (90), livestock (14) and other enterprises (22).

Category	No. of Technology Assessed	No. of Farmers
Technology Assessed		
Crops	90	479
Livestock	14	87
Various enterprises	22	100
Grand Total	126	681

Extension Programmes

Extension programs are one of the important mandated activities to be carried out by the KVKs of Uttar Pradesh. The details of activities are given as under--

Category	No. of Program mes	Total Participa nts
Extension activities	7700	290756
Other extension activities	2715	-
Total	10415	290756



MOBILE ADVISORY SERVICES

Name of KVKs	Message Type	No. of Message Sent
Ambedkar Nagar, Ayodhya, Azamgarh, Bahraich I, Ballia, Barabanki, Basti, Chandauli, Gonda II, SK Nagar, Siddharthnagar, Sonbhadra, Sultanpur II	Text only	5205
	Voice only	4537
	Voice & Text both	1765
	Total Messages	11507
	Total farmers Benefitted	134401

SOIL, WATER & PLANT ANALYSIS

	Samples	No. of Beneficiaries	Value Rs.
Soil	4823	9558	48230
Water	-	-	-
Total	4823	9558	48230

Seed & Planting Material Production

KVKs of University have given emphasis on production of quality seeds/seedlings/livestock strains/bio products etc, which are important and suitable for the district.

Production type	Quintal/Number	Value (Rs)
Seed (q)	4568.34	13047903
Planting material (No.)	686269	805556
Bio-Products (kg)	21.35	33240
Livestock Production (No.)	1530	138000



Glimpses of variuos KVK activities

FINANCE

The total budget (in crores) of the University for the Financial Year 2019-2020 is given below.

TOTAL BUDGET OF THE UNIVERSITY (2019-2020)

S.No.	Receipt from	Amount (Crores)
1	State Government	83.43
2	Central Government	32.21
3	Private Sector	1.1
4	Revenue generated	16.43
	Total	133.17

Internal resources:

The internal sources of revenue includes fees such as registration, tuition, lab, medical examination, library fee, sports, admission, magazine, room accommodation etc collected from the students. Other sources include the

revenue generated through the sale of farms produce, seeds, bank interests, institutional charges etc.

The details of internal resources generated by the University during 2019-2020 are given in Table.

Revenue generation during FY 2019-20

S.No.	Total Revenue generated (A)	Amount in Rs.
		Crores
1	Tuition fee	13.07
2	Sale of inputs	2.14
3	Others (Bank interest, Institutional charges, advertisements)	1.22
	Total	16.43



HONOURS & ACCOLADES

A. HONOURS & ACCOLADES UNIVERSITY AWARD

University got the **Best AICRP center award** for the year 2018-19 during the 30th workshop of ICAR-All India coordinated research project on spices during November 14-16, 2019.



COLLEGE OF VETERINARY SCIENCE

- **Dr. V. K. Singh** received **best paper award** in International conference on animal nutrition on “nutritional strategies for improving farm profitability and clean animal production” organized by West Bengal University of animal and fishery sciences, Kolakata in collaboration with Animal Nutrition Society from 17-19 December, 2019.

- **Dr Sonu Jaiswal** received “**Excellence in Teaching Award**” in recognition of novelty valuable contribution and achievements by Green Agri Professional Society (GPS).

- **Dr Naveen Kumar Singh** received **Best Participation Award** on the occasion of 1st Annual Convention of Veterinary Internal and Preventive Medicine Society & National Symposium on “**Sustainable Improvement in Animal Health and Production – Bridging Science and Policy for Economic Upliftment of Farmers**” on November 8-9, 2019 jointly organized by Department of Veterinary Medicine, C.V.Sc. & A.H., DUVASU, Mathura & Central Institute for Research on Goats (CIRG) – Farah, Mathura.

COLLEGE OF AGRICULTURE

Dr. N.R. Meena

- Young Scientist Award by Indian Society of Extension Education

- Dr. N. R. Meena received **Young Scientist Award** by Indian Society of Extension Education

- **Dr. R. K. Doharey** received “**Outstanding Scientist Award 2019**” on 10-11, August, 2019 for the occasion National Conference on “Doubling Farmers Income for Sustainable and Harmonious Agriculture” organized by Science and Technology Society for Integrated Rural Improvement, Thorur, Warangal, Telangana, India. For outstanding contribution in the field of Agricultural Extension on the occasion of National conference held at BAU, Ranchi, Jharkhand from 10-11, August, 2019

- **Dr. Vinod Kumar** received “**Best Teacher Award**” by awarding agency Acharya Narendra Deva University of Agriculture & Technology, Kumarganj, Ayodhya on 5th September, 2020

- **Akankash Tiwari** received “**Excellence in Teaching Award**” during International Conference on Global Research Initiatives for Sustainable Agriculture & Allied Sciences (GRISAAS-2019), 20-22, October 2019 at ICAR-National Academy of Agricultural Research Management, Hyderabad, Telangana

- **Akankash Tiwari** received “**Best Young Teacher in Genetics & Plant Breeding**” during Inter National Seminar on “Management of Natural Resources and Environmental Security” organized by Udyaniki Krishi Anushandhan Samiti Lucknow (U.P) India on 3rd Nov. 2019

- **Vijay Laxmi Rai** received “**Best Teacher in Agricultural Entomology**” award during International seminar on “Management of Natural Resources and Environmental Security” organized by Udyaniki Krishi Anusandhan Samiti, Lucknow on 3rd November, 2019

- **Renu Gangwar** received “**Young Teacher in Agricultural Extension**” award during International seminar on “Management of Natural Resources and Environmental Security” organized by Udyaniki Krishi Anusandhan

Samiti, Lucknow on 3rd November, 2019

COLLEGE OF FISHERIES

- **Dr. Dinesh Kumar** received **Environmental Award – 2019**, by Agricultural and Environmental Technology Development Society (AETDS), U.S. Nagar, Uttarakhand. In International Conference- Global Perspective in Agricultural and Applied Sciences for Food and Environmental Security (GAAFES2019). 1-2 December 2019.

- **Dr. Dinesh Kumar** was awarded **Best Poster Presentation Award** during International Conference- Global Perspective in Agricultural and Applied Sciences for Food and Environmental Security (GAAFES2019). 1-2 December 2019.

- **Dr. Sunil Kant Verma** received **Best Teacher Award – 2019** by Agricultural and Environmental Technology Development Society (AETDS), U.S. Nagar, Uttarakhand. In International Conference- Global Perspective in Agricultural and Applied Sciences for Food and Environmental Security (GAAFES2019). 1-2 December 2019.

SEED PRODUCTION UNIT:

- **Dr. K.K. Srivastava** received **Fellow Award** by Science & Tech Society for Integrated Rural Improvement (SIRI), Thorrur, Telangana – 506 163

- **Dr. R.D.S. Yadav** received **Fellow Award** by Indian Society of Pulses Research and Development, IIPR, Kalyanpur, Kanpur.

- **Dr. S.C. Vimal** received **Fellow Award** by United Lighting Vision, Bengaluru, Karnataka

B. SEMINARS/SYMPOSIA/ TRAININGS ORGANIZED:

COLLEGE OF VETERINARY SCIENCE

- Seminar, quiz, painting and slogan

competitions to mark World Rabies Day

- One day workshop on “Capacity Building in Disaster Management” sponsored by NAHEP on 4th November 2019

- Three days training program on “Capacity building of Veterinary Officers for effective delivery of critical services” sponsored by UPVCI from 11th to 13th February 2019 as Course Director .

- Capacity building workshop on “Addressing human wildlife interface issues”.

- One day workshop on “Capacity Building on Disaster Management”

- Training Cum Workshop On Animal Welfare and Equine Medicine

- Training to the trainers

C. PARTICIPATION:

COLLEGE OF VETERINARY SCIENCE

Dr. A. K. Srivastava

- Participated in the one day workshop on “Small Animal Neurology and Weight Management” organized by UP Veterinary Practitioners Association held on 13th October . 2019, Agra.

- Participated in the conference on “Companion Animals Vector Born Diseases, Diagnosis, Treatment Control New Avenues” organized by UP Veterinary Practitioners Association held on 8th September. 2019, Lucknow.

- **Dr. Chandra Shekhar** participated in a workshop on “*Capacity building in disaster management*” on 4th Nov., 2019, organized by College of Veterinary Science & A. H., A. N. D. University of Ag. & Tech., Kumarganj, Ayodhya (U. P.), under ICAR-NAHEP Innovation Grant Project.

- **Dr. S. K. Maurya** participated in National Seminar on “Current research in Veterinary Biochemistry and Biotechnology in the improvement of Animal health and production” organized by Department of Veterinary



Biochemistry, College of Veterinary Science, Sri Venkateswara Veterinary University, Tirupati-517 502 on February, 4th-5th, 2020.

Dr. Sonu Jaiswal participated in

- Three Day Capacity Building Workshop on “Addressing Human Wild Life Interface Issues” for Veterinary Students under ICAR NAHEP-IG project on 22-24.10.2019 at College of Veterinary Science, ANDUAT, Kumarganj, Ayodhya as a Resource Person.

- Participated in One Day Workshop on “Capacity Building in Disaster Management for Veterinary Students under ICAR NAHEP-IG project on 04.11.2019 at College of Veterinary Science, ANDUAT, Kumarganj, Ayodhya as a Resource Person.

- Participated in Three Day Refresher Training Program on “Capacity Building of Veterinary Officer for Effective Delivery of Critical Services” on 11-13 Feb, 2020 at College of Veterinary Science, ANDUAT, Kumarganj, Ayodhya sponsored by UP Veterinary Council as a Resource Person.

Dr. Naveen Kumar Singh participated in

- 38th Annual Convention of Indian Society for Veterinary Medicine & National Symposium on “**Advancement in Veterinary Medicine in Mitigating Challenges to Animal Health**” held at Veterinary College, KVAFSU, Hebbal, Bengaluru on 5th-7th February, 2020.

- 1st Annual Convention of Veterinary Internal and Preventive Medicine Society & National Symposium on “**Sustainable Improvement in Animal Health and Production – Bridging Science and Policy for Economic Upliftment of Farmers**” on November 8-9, 2019 jointly organized by Department of Veterinary Medicine, C.V.Sc.&A.H., DUVASU, Mathura & Central Institute for Research on Goats (CIRG) – Farah, Mathura.

- Capacity Building Workshop on “**Addressing Human Wildlife Interface Issues**” on October 22-24, 2019 held at College of Veterinary Science and Animal Husbandry, ANDUAT, Kumarganj, Ayodhya (U.P.).

COLLEGE OF HORTICULTURE

A total of twenty two national and international conferences/seminars/webinar has been attended by different scientist of College at different places.

COLLEGE OF COMMUNITY SCIENCE

Dr. Sadhna Singh attended

- 5th U.P. Agricultural Science Congress on “Enhancing Farmers Income and water conservation: Opportunities and challenges” held at Institute of Agricultural Sciences, Banaras Hindu University, Varanasi from 22 to 24 February 2020.

- Two days National Webinar on “Food and Nutrition in the present scenario of COVID-19 held on May 13-14 2020 organized by Vasant Kanya Mahavidyalaya, Kamachha Varanasi.

DIRECTORATE OF RESEARCH

- Dr. M.P. Chauhan and Dr. Subhash Chandra attended Annual Group Meet on Rabi MULLaRP crops at CAU Imphal, Manipur Sept. 12-13, 2020.

- Dr. M.P. Chauhan attended Annual Group Meet on Summer/Spring Urdbean and Mungbean at BARC Trombay, Mumbai from Nov. 11-12, 2020.

- Dr. M.P. Chauhan and Dr. Subhash Chandra attended Annual Group Meet on Kharif Urdbean and Mungbean from June 2-4, 2020.

- Dr. R.S. Yadav participated in National Group Meet (Rabi 2019-20) of AICRP on forage crops held at C.A.U., Imphal, Manipur during

August 30-31, 2019.

- Dr. R.S. Yadav participated in National Group Meet (Kharif-2020) of AICRP on forage crops held online organized by AICRP on Forage Crops, IGFRI, Jhansi, on 01-06, 2020.

- Scientist of AICRP on Wheat & Barley attended and participated 58th All India Wheat Workers Meet held at ICAR-IARI, Regional Station Indore and Indian Institute of Wheat and Barley Research, Karnal, Haryana from 24-26 August, 2019.

- Dr Niraj Kumar attended “Training entitled “Hands on training for On-Farm Agronomists for on-line submission and analysis of on-farm farming systems research data” on 27-29 August, 2019 at IIFS, Modipuram, Meerut.

- Dr. Shiv Nath attended Annual Group Meet of AICRP on Chickpea held at Birsa Agricultural University, Ranchi (Jharkhand) during 27th to 29th August, 2019.

- Dr. Shiv Nath attended Rabi Pulse Scientist Meet at IIPR Kanpur during 27-28 February, 2020.

- Dr. Bhanu Pratap attended National Seminar on Priorities and Strategies to Boost Farmers Income on 14-06-2019 at U.P. Council of Agriculture Research Lucknow.

- Dr Bhanu Pratap attended National Seminar organized on the occasion of National Unity Day on Horticulture- A Boon for Indian Economy held at Department of Horticulture, School of Agriculture Science & Technology, BBA University Lucknow on dated 31-10-2019.

- Dr. Bhanu Pratap Presented oral paper entitled “Effect of propagation time and method of propagation on bud uptake in Jamun” in Progressive Horticulture Conclave (PHC) 2019 on Futuristic Technologies in Horticulture at IISR Lucknow during 8-9 December, 2019.

- Dr. S.K. Verma **presented Paper on** “Study on Litter decomposition and amount of nutrient return through litter fall of *Populus deltoides* (Poplar) clones in paddy and wheat crop under partially reclaimed sodic soils” in International Conference on Innovations in Plant and Animal

Sciences for Sustainable Agriculture and Rural Development (IPPASSARD-2019) at RARI, Jaipur during December 07-09.

- Dr S.K. Verma Attended “**Annual Group Meeting cum workshop on AICRP (AF)**” at FCRI, Mettupalayam (TNAU) during 18-20 September 2019.

- **Dr. Pradip Kumar** attended International Conference on Recent Trends in Science, Technology, Agriculture and Management (RSTAM-2019) held at FDDI, Furshatganj, Raebareilly on 20-21 October 2019 and presented research paper as oral presentation - Chandra Pati Singh, **Pradip Kumar** and J. P. Singh (2019). Evaluation of Mid Early Duration genotypes of Rice for Eastern Uttar Pradesh, which was awarded best oral presentation.



PUBLICATIONS

A. RESEARCH PAPERS

- Bahadur, R.; Nath, S. Singh, V.; Vimal, S.C. and Kewat, R. (2020). Economic management for higher grain yield under integrated crop management in lentil. *Int. J. Curr. Microbiol. App. Sci*, Special Issue-10:368-376.
- Bahadur, R.; Nath, S. Singh, V.; Vimal, S.C. and Kewat, R. (2020). Economic management for higher grain yield under integrated crop management in lentil. *Int. J. Curr. Microbiol. App. Sci*, Special Issue-10:368-376.
- Bahadur, R.; Vimal, S.C.; Kumar, A.; Khan, N.A. and Kumar, N. (2020). Mitigation of drought and heat for improving productivity by use of foliar application of salicylic acid in chickpea. *Int. J. Curr. Microbiol. App. Sci*, Special Issue-10:377-387.
- Bahadur, R.; Vimal, S.C.; Kumar, A.; Khan, N.A. and Kumar, N. (2020). Mitigation of drought and heat for improving productivity by use of foliar application of salicylic acid in chickpea. *Int. J. Curr. Microbiol. App. Sci*, Special Issue-10:377-387
- Baranwal, S. et al. (2019). Evaluation of crop simulation modeling in chickpea crop using DSSAT model ver 4.6 *International Journal of Chemical Studies* 7(2): 655-658.
- Chandra, S., Rajvanshi, N. K., Kumar, P., Tripathi, R. M. and Chauhan, M. P. (2019). Reaction of Urdbean (*Vigna mungo*) Genotypes against *Cercospora* leaf spot (CLS). *International Journal of Chemical Study* 7(3): 439-440.
- Chandra, S., Kumar, M., Rajvanshi K. N. and Chaudhary, V. P. (2020). Comparison among botanicals, bio-agents and chemical control against *fusarium oxysporum* f. sp. *ciceris* in vitro. *The Pharma Innovation Journal* 2020; 9(3): 323-324.
- Chandra, S., Kumar, M., Rajvanshi K. N., Chaudhary, V. P. and Rajpoot, S.K..S. (2020). Efficacy of seed dresser fungicides, botanicals and bioagents against *fusarium oxysporum* f. sp. *Lentis* in vivo. *The Pharma Innovation Journal* 2020; 9(3): 293-296.
- Chandra, S., Kumar, M., Rajvanshi, N. K. and Chaudhary, V. P. (2019). Screening of lentil genotypes against *Fusarium oxysporum* f. sp. *lentil* in field condition. *International Journal of Chemical Study* pp809-811.
- Chandra, S., Kumar, P. and Gupta, A. B. (2016). Evaluation of Fungicide and botanicals *In-vitro* against sheath blight (*Rhizoctonia solani*) in rice (*Oryza sativa* L.). *Plant Archives* 16(1): 167-170.
- Chandra, S., Kumar, P. and Kumar, S. (2018). Field evaluation of fungicides and botanicals against sheath blight, *Rhizoctonia solani* in rice (*Oryza sativa* L.). *An Asian Journal of Soil Science* 11(1): 95-97.
- Chandra, S., Kumar, P. and Singh, D.C. (2016). Screening of Promising genotypes of rice (*Oryza sativa* L.) against *Rhizoctonia solani* Kuhn *Progressive Research: an international Journal* 11(2):943-945.
- Chandra, S., Rajvanshi, N. K. and Kumar, P. (2019). Screening of chickpea (*Cicer arietinum* L.) genotypes against fusarium wilt (*Fusarium oxysporum* f. Sp. *ciceris*). *Progressive Research: an international Journal* 11(1): 30-32
- Chandra, S., Rajvanshi, N. K., and Kumar, A. (2019). Evaluation of lentil genotypes against *Fusarium oxysporum* f. sp. *lentis* under artificial epiphytotic condition. *J. of Pharmacognosy and Phytochemistry*, sp2: 955-956.
- Chandra, S., Rajvanshi, N. K., Chauhan, M. P. and Kumar, M. (2019). Evaluation of Mungbean [*Vigna radiate* (L.) Wilczek] Genotypes for resistance against web blight. *International Journal of Chemical Study* 7(3): 466-468.
- Chandra, S., Rajvanshi, N. K., Kumar and Chand, R. (2019). Identification of lentil genotypes resistant to *Fusarium oxysporum* f. sp. *Lentis*. *Ann. Pl. Protec. Sci*, 27 (2): 302-303.
- Chandra, S., Rajvanshi, N. K., Kumar, A. and Kumar, P. (2018). Management of vascular wilt (*Fusarium oxysporum* f. sp. *lentis*) of lentil (*Lens culinaris* Medic.) through botanicals and bioagents. *J. of Pharmacognosy and Phytochemistry*, Sp Iss.-4: 241-244.
- Chandra, S., Rajvanshi, N. K., Kumar, A., Kumar, P. and Punam, K. (2019). New sources of resistance against *Fusarium oxysporum* f.sp. *udum* causing wilt of pigeonpea. *J. Pharmacognosy and Phytochemistry*, 8 (4) 938-939.
- Chandra, S., Rajvanshi, N. K., Kumar, A., Punam, K. and Chand, R. (2019). Evaluation of pigeonpea genotypes for resistance to Fusarium wilt. *Ann. Pl. Protec. Sci*, 27 (2): 305-306.
- Chandra, S., Rajvanshi, N. K., Kumar, P. and Kumar, M. (2019). Field evaluation of pigeonpea (*Cajanus cajan*) genotypes against fusarium wilt to disease resistance. *International Journal of Chemical Study* 7(4): 361-362.
- Chandra, S., Rajvanshi, N. K., Kumar, P., Kumar, M. and Chauhan, M. P. (2019). Screening of Mungbean [*Vigna radiate* (L.) Wilczek] Genotypes for resistance against Mungbean Yellow Mosaic Virus (MYMV) under field condition. *International Journal of Chemical Study* 7(4): 469-471.
- Chandra, S., Singh, H.K., Kumar, P. and Yadav, N. (2016). Screening of rice (*Oryza sativa* L.) genotypes of sheath blight (*Rhizoctonia solani*) in changing climate scenario. *Journal of Agri Search* 3(2): 130-132.
- Chaubey A.N. and Mishra, R.S. (2020). Leaf curl disease of Capsicum annum and its impact on secondary metabolites. *Journal of Pharmacology and Phytochemistry* vol 9(2): 2247- 2251.

- Chaubey A.N. and Mishra, R.S. (2020). Studies on Leaf curl disease of *Capsicum annum* and its impact on secondary metabolites. 5th Uttar Pradesh Agriculture Science Congress: Enhancing farmers income and water conservation; Opportunities and challenges: held on February 22-24, 2020 at BHU. Varanasi, UP, India.
- Das, A., Gupta, S., Parihar, A.K., Sexsena, D., Singh, D., Singha, K. D., Kushwaha, K. P. S., Chand, R., Bal, R. S., and Chandra, S. (2019). Deciphering genotypes by – environment interaction for targeting test environments and rust resistant genotypes in field pea (*Pisum sativum* L.). *Frontiers in Plant Science* pp 1-10 doi: 10.3389/fpls.2019.00825.
- Dwivedi, Garima; Singh, Sadhna and Giri, Deepti (2019). Effect of varieties and processing on nutritional composition of fenugreek seeds. *The pharma innovation journal* 8 (12): 68-72.
- Dwivedi, Garima; Singh, Sadhna and Tiwari, Vashvi (2019). Organoleptic properties and the utilization of raw and germinated fenugreek seeds. *Journal of Pharmacognosy and phytochemistry*, 8(4); 2568-2570.
- Dwivedi, Garima; Singh, Sadhna and Giri, Deepti (2019). Physico-chemical properties of different varieties of fenugreek seeds. *Int.J.Curr.Microbiol.App.Sci.* 8 (11) : 1245-1250. NAAS Score:5.38.
- Dwivedi, Garima; Singh, Sadhna and Tiwari, Vashvi (2019). Preparation, processing and nutritional attributes of raw and germinated fenugreek seed pickles. *International J. of Food Science and Nutrition* 4; 151-154.
- Giri, S.P., Dixit, S., Verma, D.k., Parkash, N., Prasad, V., Singh, C.P., Dwivedi, D.K., Singh A.K and Singh, C.B (2019) Evaluation for yield, yield component traits and quality parameters of rice *Oryza sativa*. L. *Int. J. Curr. Microbiol. App. Sci.* special issue (10):277-283
- Giri, S.P., Dixit, S., Verma, D.k., Parkash, N., Prasad, V., Singh, C.P., Dwivedi, D.K., Singh A.K and Singh, C.B (2019) Evaluation for yield, yield component traits and quality parameters of rice *Oryza sativa*. L. *Int. J. Curr. Microbiol. App. Sci.* special issue (10):277-283 (NAAS Rating 5.38)
- Giri, S.P., Dixit, S., Verma, D.k., Singh, C.P., Prakash, N., Rajpoot, S.K.S., Prasad, V., Singh, C.P., Dwivedi, D.K., Singh A.K and Singh, C.B (2020) “ Impact analysis of front line demonstration of rice in Eastern Uttar Pradesh” . *Int. J. Curr. Microbiol. App. Sci.* special issue (10):297-301.
- Gopal, R., Verma, D.K., Yadav, S.K., Rajput, S.K.S., Chandra, S., Singh, V., Pandey, M.K. (2016). Evaluation of different crop establishment techniques of rice in irrigated ecosystem of eastern Uttar Pradesh. *Progressive Research: An international Journal* 11(1): 163-164.
- Gupta A. D.; Ashish Gupta; Varshney L. and Yashi Gupta. (2019) "Thermal Performance analysis of a Packed Bed Solar Air Heater Having rounded tip V-Grooved Absorber", *International Journal of recent scientific research*, Vol.10, No.03, pp.31408-31412.
- Gupta, A.D, Mishra A, Mehta R K, Gupta Y, Pandey S K. 2020. Experimental Investigation for Photo-voltaic Power Generation using the Concept of Solar Tree. *Int. J. multidisciplinary and Development*, Vol 7 (1): 1-4 pp.
- Gupta, A.D., Mishra, A., Mehta, R.K., Gupta, Y., Pandey, S.K. 2019. Experimental Investigation for photo-voltaic power generation using the concept of solar tree *International Journal of Multidisciplinary Research and Development*, Volume 7; Issue 1; January 2020; Page No. 01-04.
- Gupta, Ashish; Gupta; A. D. Gupta, Yashi and Mehta, R. K. (2019) "Performance Evaluation of Load Frequency Control with Different Techniques with PID Controller", *International Journal of Recent Scientific Research*, Vol.10, No.03, pp.31472-31481.
- Gupta, Ashish; Mehta, R. K.; Rai, M. (2019) “A Consolidated and Comparative Analysis of Software Metrics Tools for Systems Performance Evaluation: A Survey” accepted in *International Journal of Advanced Research in Computer and Communication Engineering (IJARCCE)* for Vol. 8, Issue 4, 2019.
- Gupta, J.P., Kumar, R. and Kumar, V. (2019). Effect of nitrogen management and plant growth regulators on yield and yield attributes of wheat (*Triticum aestivum* L.). *International J of Chemical Studies*, PP6: 272-274
- Gupta, JP, Kumar, R. and Kumar, V (2019). Effect of nitrogen management and plant growth regulators on growth attributes of wheat (*Triticum aestivum* L.). *International J of Chemical Studies*, SP6: 260-263
- Gupta, R. K., Niyogi, D., Singh, H. K., Jaiswal, S., Chaudhary, P. K. and Varun, V. K. (2019). Clinical and HemaTOLOGICAL Changes in Cattle Naturally Affected with Tropical Theileriosis. *Journal of Entomology and Zoology Studies* 7(4): 1056-1058.
- Gupta, R. K., Niyogi, D., Singh, J. P., Jaiswal, S., Chaudhary, P. K. and Varun, V. K. (2019). Study on Incidence of Chronic Respiratory Disease in Layer and Broiler Chickens in Ayodhya District of Eastern Uttar Pradesh. *Int. J. Curr. Microbiol. App. Sci.* 8(8): 1327-1332.
- Gupta, Rakesh Kumar; Niyogi, D; Tripathi, K. K; Joshi, R.K.; Joshi, N and Singh, S.V. (2020) Pathomorphological and Immunohistochemical Changes in lungs of poultry affected with chronic respiratory disease in Ayodhya District of Uttar Pradesh. *International Journal of Livestock Research*. (Manuscript number; IJLR-2020-05-169)
- Hitaishi, S.K.; Vimal, S.C. and Chaudhary, A.K. (2020). Association and path analysis of yield attributes and physiological parameters in rice (*Oriza sativa* L.) under problematic soil conditions. *Pharma Innovation J.*, 9(9):347-353.



- Hitaishi, S.K.; Vimal, S.C. and Chaudhary, A.K. (2020). Association and path analysis of yield attributes and physiological parameters in rice (*Oriza sativa* L.) under problematic soil conditions. *Pharma Innovation J.*, 9(9):347-353.
- Hitaishi, S.K.; Vimal, S.C. and Chaudhary, A.K. (2020). Heterosis and inbreeding depression for yield, its contributing characters and physiological parameters in rice (*Oriza sativa* L.) under stress conditions. *Journal of Pharmacology and Phytochemistry*, 8(1): 1216-1218.
- Hitaishi, S.K.; Vimal, S.C. and Chaudhary, A.K. (2020). Heterosis and inbreeding depression for yield, its contributing characters and physiological parameters in rice (*Oriza sativa* L.) under stress conditions. *Journal of Pharmacology and Phytochemistry*, 8(1): 1216-1218.
- Jaiswal, S. K. Gupta, R. K., and Jaiswal, S. and Niyogi, D. (2020). Copper poisoning in farm animals: Diagnostic and preventive Approach. *Int.J.Curr.Microbiol.App.Sci*, 9(1): 2224-2230.
- Jakhar SR, Mitra NG, Chaile-U R, Rai HK, Baghel SS, Vinod Kumar (2019) Relative efficiency of *Pseudomonas florescence* containing ACC-deaminase for improving nutrient content, soil fertility and yield of maize. *International J of Chemical Studies* 7(5): 595-600.
- Jeet, R.; Srivastava, R.K.; Vimal, S.C; Singh, Sagar, V.; Bitthal; Singh, S.P. and Kumar, V. (2019). Studies of genetic variability, heritability and genetic advance in linseed (*Linum usitatissium* L). *Multilogic in Science*, Vol.- VIII (Special):157-159.
- Jeet, R.; Srivastava, R.K.; Vimal, S.C; Singh, Sagar, V.; Bitthal; Singh, S.P. and Kumar, V. (2019). Studies of genetic variability, heritability and genetic advance in linseed (*Linum usitatissium* L). *Multilogic in Science*, Vol.- VIII (Special):157-159.
- Jeet, R.; Vimal, S.C; Singh, P.K.; Kumar, V.; Sagar, V.; Nath, S. and Kumar, P. (2019). Combining ability studies for certain quantitative characters in linseed (*Linum usitatissium* L). *Multilogic in Science*, Vol.- VIII (Special):58-62.
- Jeet, R.; Vimal, S.C; Singh, P.K.; Kumar, V.; Sagar, V.; Nath, S. and Kumar, P. (2019). Combining ability studies for certain quantitative characters in linseed (*Linum usitatissium* L). *Multilogic in Science*, Vol.- VIII (Special):58-62.
- Katiyar, Dheeraj; Srivastava, K.K.; Prakash, S.; Kumar, M. and Gupta, Mohit (2019). Study correlation coefficients and path analysis for yield and its component characters in Rice (*Oryza sativa* L.). *Journal of Pharmacology and Phytochemistry*, 8(1):1783-1787.
- Katiyar, Dheeraj; Srivastava, K.K.; Prakash, S.; Kumar, M. and Gupta, Mohit (2019). Study correlation coefficients and path analysis for yield and its component characters in Rice (*Oryza sativa* L.). *Journal of Pharmacology and Phytochemistry*, 8(1):1783-1787 (NAAS-5.21).
- Kumar, A. K.; Yadav, R. S.; Kumar, R.; Kumar, S. and Kumar, D. (2019). Effect of spacing and nutrient management on growth, yield, yield attributes, quality characters and economics in *Hirsutum* cotton in central plain zone of UP. *International Journal of Chemical Studies* 7(4):1012-1017.
- Kumar, Raj; Pandey, V.P.; Singh, B.N. and Prakash, Ved (2019). Response of organic manures on growth, yield, nutrient uptake of potato and its impact on soil health. *Journal of Pharmacology and Phytochemistry*. 2019; 8(4) pp 627-629.
- Kumar, S., Singh, S.P., Chandra, S., Kumar, A. and Chand, R. (2019). Use of different doses of systemic fungicide (Propiconazol) for management of foliar blight diseases of barley. *Multilogic in Science* Voll. VIII, Sp. Issue (E): 143-145
- Kumar, S.; Pandey, V.P.; Singh, D.; Kumar, M. and Yadav, D.(2019). Poly tanaltakniki se sabjipaudhshalaugayen. *Madhya KrishakBharti* April. Pp 14.
- Kumar, Satyendra; Chaudhary, Anand Mohan; Purushottam; Singh, Vinod and Chauhan, M.P. (2019). Correlation coefficient and path coefficient analysis in some quantitative trait's in bread wheat (*Triticum aestivum* L.). *J. Pharmacology & Phytochemistry* Vol. 8(4): 536-540.
- Kumar, Satyendra; Chaudhary, Anand Mohan; Purushottam; Singh, Vinod and Chauhan, M.P. (2019). Studies of variability, heritability and genetic advance in some quantitative characters in bread wheat (*Triticum aestivum* L.). *J. Pharmacology & Phytochemistry* Vol. 8(4): 402-404.
- Kumar, V., Mishra, D.P., Kumar, Vimlesh, and Tiwari, A.K. (2020). Correlation and path coefficient analysis for yield and component traits in different genotypes of potato (*Solanum tuberosum* L.) under Eastern Uttar Pradesh condition. *International Journal of chemical studies*. Vol. 8 (4): 2866-2870
- Kumar, V. ; Mishra, S.R.; Mishra, A.N.; Singh, A.K.; Singh, R.B.; K, Vishesh; and Sharma, K. D. (2019). Larval fluctuation of *Helicoverva armegera* with reference to environmental factors on chickpea crop, *International Journal of Chemical Studies*; 7(4):1983-1985.
- Kumar, V. ; Mishra, S.R.; Mishra, A.N.; Singh, A.K.; Singh, R.B.; K, Vishesh; and Sharma, K. D. (2019). Larval fluctuation of *Helicoverva armegera* with reference to environmental factors on chickpea crop, *International Journal of Chemical Studies*; 7(4):1983-1985.
- Kumar, V. ; Mishra, S.R.; Singh, R.B.; K, Vishesh; K. Rovit and Sharma, K. D. (2019). Effect of environmental factors on pod damage percentage by gram pod borer (*Helicoverva armegera*) , *International Journal of Chemical Studies*; 7(4):1986-1988.

- Kumar, V.; Mishra, S.R.; Singh, R.B.; K, Vishesh; K. Rovit and Sharma, K. D. (2019). Effect of environmental factors on pod damage percentage by gram pod borer (*Helicoverpa armigera*), *International Journal of Chemical Studies*; 7(4):1986-1988.
- Lal, Kanhaiya; Yadav, C.B.; Shiva Nath and Dwivedi, D. K. (2019). Genetic variability and diversity analysis in faba bean (*Vicia faba* L.). *Trends in Bioscience* 12(11): 754-760. ISSN 0974-8431
- Lal, Kanhaiya; Yadav, C.B.; Shiva Nath and Dwivedi, D. K. (2019). Correlation and path coefficient analysis of yield and its components in faba bean (*Vicia faba* L.). *Trends in Bioscience* 12(11): 779-787. ISSN 0974-8431.
- Lal, Kanhaiya; Yadav, C.B.; Shiva Nath and Dwivedi, D. K. (2019). Heterosis response for yield and its components in faba bean (*Vicia faba* L.). *International Journal of Current Microbiology and Applied Sciences* 8(6): 662-677. ISSN 2319-7706.
- Mishra, R.S. (2019) Evaluation of turmeric genotypes for quality, yield and disease resistant. *International Journal of Advance Biological research* Vol 9(2); 133-135.
- Mishra, R.S. (2019) Narendra Methi-2: Screening of high yield variety and ancillary observations of fenugreek (*Trigonella foenum graecum*). *International Journal of Agriculture Sciences* Vol 11(16); 0975-9107
- Mishra, R.S. (2019). Efficacy of fungicides against powdery mildew of coriander. *J. Pl. Dis. Sci.* Vol 14(1): 94-95.
- Mishra, R.S. (2019). Efficacy of plant extracts with different solvents against *Taphrina* leaf spot of turmeric. *Plant Archives* Vol 19(1); 383-386.
- Mishra, R.S. (2020). Effect of organic treatments on total phenol, saponin and flavonoids in leaf spot infected fenugreek leaves. *Journal of Pharmacognosy and Phytochemistry* vol 9(2): 1558-1560.
- Mishra, R.S. and Pandey, V.P. (2019) Evaluation of turmeric accessions for tolerance to foliar diseases. *International Journal of Agriculture Sciences* Vol 11(24); 9308-9309.
- Mishra, R.S. and Singh, J.P. (2019). Eco-friendly management of *Taphrina* leaf spot disease of turmeric. *Plant Archives* Vol 19(1); 1175-1178.
- Mishra, Vikash Kumar; Srivastava, K. K. and Yadav, P. K. (2019). Genetic variability and character association studies in Wheat (*Triticum aestivum* L.) *International Journal of Chemical Studies*, (6):1637-1641.
- Mishra, Vikash Kumar; Srivastava, K. K. and Yadav, P. K. (2019). Genetic variability and character association studies in Wheat (*Triticum aestivum* L.) *International Journal of Chemical Studies*, (6):1637-1641
- Nilam Mishra, Dr Razia Parvez, Dr Abha Singh, Dr Diksha Gautam (2020) Comparative study on weight loss and volume loss of tomato under Janta Cool chamber and ambient condition. *The Pharma Innovation Journal* PP 197-199, 2020 TPI
- Pakash, S.; Srivastava, K.K.; Katiyar, Dheeraj; Purushottam; Anuj, R. and Kumar, Kamlesh (2019). Assessment of genetic diversity among rice (*Oryza sativa* L.) genotypes for growth and yield characters. *Journal of Pharmacognosy and Phytochemistry*, 8(1):956-961.
- Pakash, S.; Srivastava, K.K.; Katiyar, Dheeraj; Purushottam; Anuj, R. and Kumar, Kamlesh (2019). Assessment of genetic diversity among rice (*Oryza sativa* L.) genotypes for growth and yield characters. *Journal of Pharmacognosy and Phytochemistry*, 8(1):956-961.
- Pal, P., Kumar, S., Zaidi, S.F.A., Yadav, R.S., Chandra, S., Bhargose, R. and Chand, R. (2018). Response of phosphogypsum to various cultivars of fodder oat (*Avena sativa* L.) in sodic soils. *Multilogic in Science* Voll. VIII, Sp. Issue(E): 350-352
- Pal, V.K., Singh, A., Singh, N. K., Jaiswal, S. and Singh, H. K. (2020). Therapeutic Management of Theileriosis in Cross Bred Cattle. *Journal of Entomology and Zoology Studies*, 8(3): 429-431.
- Pandey, A., Singh, S. V., Singh, N. K., Ramakant, Singh, J. P., Gupta, R. K. and Niyogi, D. (2020). Effect of feeding *Embilica officinalis* (Amla) on milk quality in cattle affected with subclinical mastitis. *Journal of Pharmacognosy and Phytochemistry*, 9(2): 1259-1264.
- Pandey, S. K., Choubey V., Mishra, P. K. and Pandey, S. 2019. Performance Evaluation of Mahua Stamen Remover, *International Journal of Agricultural Engineering*, Vol.12 (2), 199-202.
- Pandey, V.K.; Singh, B.N.; Kumar, M.; Dubey, S.; Singh, V.; Pandey, D. and Kumar, A. (2019). Effect of tillage practices and moisture regimes on the performance of growth, yield and nutrient uptake of timely sown wheat (*Triticum aestivum* L.). *International Journal of Current Microbiology and applied Science*. ISSN: (2019); 8(3) pp 2368-2375.
- Pandey, D.; Singh, G.; Rajkumar, Ras, A.; Kumar, M. and Kumar, A. (2019). Effect of weed management practices on growth and yield of Indian mustard. *Jr. Pharmacognosy and phytochemistry*. 8 (4): 3379-3387.
- Parihar, A. K., Basandrai, A. K., Sexena, D. R., Kushwaha, K. P.S., Chandra, S., Singh, K. D., Bal, R. S., et al. (2018). Targeting test environments and rust-resistant genotypes in lentils (*Lens culinaris*) by using heritability-adjusted biplot analysis. *Crop Past. Sci.* 69, 1113-1125. doi: 10.1071/CP18259
- Parihar, A.K., Basandrai, A.K., Saxena, D.R., Kushwaha, K.P.S., Chandra, S., Sharma, K., Singh, K.D., Singh, D., Lal, H.C. and Gupta, S. (2017). Biplot evaluation of test environment and identification of lentil genotypes with durable resistance to fusarium wilt in India. *Crop and Pasture Science* 68, 1024-1030



- Patel V.K.; Pathak R.K.; Kumar, A. Singh, A. Samiksha and Patel, A. (2020). Effect of tillage and weed management practices and wheat economics. *Int. Jr. Microbiol. App. Sci.* 9(4):2096-2102.
- Pathak, V.; Rajkumar, Singh R.S.; Singh, B.N.; Tiwari, R.C. and Singh, A.P. (2020). Response of nitrogen and *azotobacter* on yield of mustard. *Int. Jr. Microbiol. App. Sci.* 15(10): 470-473.
- Prajapati, R., Joshi, N. and Joshi R. K. (2020) Isolation and Identification of Extended-Spectrum Beta-Lactamases Producing *E. coli* and *Klebsiella* from Human. *IntJ of Curr. Microbiol. App. Sci.* 9 (2):xx-xx. doi: <https://doi.org/10.20546/ijemas.2020.902.xx>
- Prakash, S.; Srivastava, K.K. and Yadav, R. D. S. (2019). Character association and path analysis of yield contributing traits and quality parameter in Rice (*Oryza sativa* L.). *International Journal of Chemical Studies*,7(4): 1264-1268
- Prakash, S.; Srivastava, K.K. and Yadav, R. D. S. (2019). Character association and path analysis of yield contributing traits and quality parameter in Rice (*Oryza sativa* L.). *International Journal of Chemical Studies*,7(4): 1264-1268.
- Prasad, R., Pandey, S. K., Chandra, S., Rajvanshi, N. K. and M.aurya, M. K. (2019). *In vitro* Evaluation of bio agents, botanicals and fungicides against *Fusarium oxysporum* f. sp. *basilica*. *International Journal of Chemical Study* pp746-748.
- Prasad, R., Pandey, S. K., Chandra, S., Rajvanshi, N. K. And Singh, D. (2019). *In vivo* Evaluation of bio agents, botanicals and fungicides against *Fusarium oxysporum* f. sp. *basilica*. *International Journal of Chemical Study* pp688-690.
- Rajpoot, S.K.S., Singh, K., Prakash, N., Giri, S.P., Singh, D.P., Singh, R.A., Upadhyay, A.L and Kumar, T (2020) "Efficacy of Biopesticide on Stem Borer and Leaf Folder of Rice in Eastern U.P". *Int. J. Curr. Microbiol. App. Sci.* Special Issue (10) 151-157.
- Rajpoot, S.K.S., Giri, S.P., Yadav, S.K., Singh, R.A., and Prakash, N (2020) "Sustainable Management of Rice Insect Pests Chinsurah Light Trap at Uttar Pradesh *Int. J. Curr. Microbiol. App. Sci. Special Issue-(10) 158-167.*
- Rajpoot, S.K.S., Prasad, V., Dixit, S., Verma, D.K., Giri, S.P. Maurya, M., R Singh, R.A and Kumar, T (2019) "Effect Of Planting Dates On The Population Of Rice Stem Borer (*Scirpophaga Incertulas* (Walker) In Eastern Uttar Pradesh" *International Journal of Chemical Studies* (Spl. Issue 6): 825-827.
- Rajvanshi, N. K., Chandra, S. and Kumar, A. (2018). Evaluation of pigeonpea genotypes against *Fusarium udum* butler under artificial epiphytic condition. *J. of Pharmacognosy and Phytochemistry*, Sp Iss.-4: 195-196.
- Rajvanshi, N. K., Chandra, S. and Kumar, A. (2018). Efficacy of botanicals, bio-agents and fungicides against *Fusarium udum* causing wilt disease of pigeonpea *in vitro*. *J. of Pharmacognosy and Phytochemistry*, Sp Iss.-4: 197-198.
- Ranjan, Ashutosh K.; Kushwaha, R.R.; Verma, R.R.; Supriya; Singh, V.K.; Mishra, Avinash and Yadav, Randhir (2020) A study of resource use efficient of Sugarcane production in Ghazipur District of Uttar Pradesh. *J of Pharmacognosy and Phytochemistry*, 9(2): 440-442
- Ranjan, K. Ashutosh; Kushwaha, R.R.; Supriya; Verma, R.R.; Singh, V.K. Singh; Yadav, Randhir and Yadav, Ram Singh (2020) An Economic analysis of Sugarcane cultivation in Ghazipur District of Uttar Pradesh *International Journal of Current Microbiology and Applied Science*, 9 pp-7
- Rezal, B, Kumar V, Srivastava S and Singh VP (2019). Evaluation on different media, pH and temperature level on mycelial growth of Oyster mushroom (*Pleurotus florida*). *Plant Cell Biotechnology and Molecular Biology*, 20(5&6):254-260
- Shekhar, C. (2020). Challenges of emerging and re-emerging zoonoses and strategies for their prevention and control. *International Journal of Livestock Research*, 10 (5) : 1 - 7 . doi : <http://dx.doi.org/10.5455/ijlr.20200227015855>
- Singh B.; Pramanik P.S.; Singh K.D.; Singh J.; Gupta V.N.; Gautam P. and Pandey, G. (2020) Post-Lambing behaviour of Muzzafarnagri sheep. *The Pharma Innovation Journal*. 2020 :SP-9(4), 18-22.
- Singh B.; Pramanik, P.S.; Singh, K.D.; Singh, N.; Gupta, V.N., Gautam, P. and Pandey G. (2020) Pre-Lambing behaviour of Muzzafarnagri sheep. *The Pharma Innovation Journal*. 2020 :SP-9(4), 23-25.
- Singh P, Jain PK and Tiwari A (2020) Principal Component Analysis Approach for Yield Attributing Traits in Chilli (*Capsicum annum* L.) Genotypes. *Chem Sci Rev Lett*, 9 (33): 87-91
- Singh, A.; Yadav, R.S.; Kumar, A.; Kumar, Abhay; Patel, V.K.; Singh, A.P. and Singh, R.P. 2020. Effect of weed management practices on yield and economics in Indian mustard. *International Journal of Chemical Studies* 8(2):1064-1067.
- Singh, A.P.; Yadav, R.S.; Singh, R.P.; Singh, A. and Singh, V. 2020. Influence of weed management practice on weeds, weed control efficiency nitrogen uptake by weeds and the crop, quality and yield of fodder oat (*Avena sativa* L.). *Int. J. Curr. Microbiol. App. Sci.* (Special Issues)-10:168-172
- Singh, B.N.; Kumar, Raj and Tiwari, R.C. (2019). Evaluation of irrigation methods, moisture regimes and integrated nitrogen management in potato. *Journal of Pharmacognosy and Phytochemistry*. 2019; 8(4) pp 2070-272.

Singh, Pratap Arvind; Doharey, R.K.; Singh, Prakash; Kumar, M.; Singh, R.K. and Pandey, R.K. (2019) Adoption level of farmers about recommended cultivation practices of green gram (summer season) in Fatehpur district of Uttar Pradesh. *International J of Pharmacognosy and Phytochemistry*, 8(1): 411-413.

Singh, V., Rajvanshi, N. K., Chandra, S. and Kumar, S. (2019). To evaluate the efficacy of botanicals and chemicals against *Cercospora* leaf spot of sarpagandha (*Rauvolfia serpentina* L.) Benth Ex Kurz. *In vivo. International Journal of Chemical Study* pp732-734.

Sinha, Vinod; Amit Singh; V. K. Pal and S. K. Maurya (2020). Anthelmintic efficacy of aqueous-alcoholic extract formulations of *Embelia ribes* fruits and *Vernonia anthelmintica* seeds against ovine gastrointestinal nematodes. *International Journal of Livestock Research*, 10(3): Mar 20: 60-66.

Tiwari, A.K., Mishra, D.P., Kumar, V.; and Kumar, Vikas ; (2020). Assess the association between the yield and yield contributing traits in garlic. *International Journal of chemical studies*. Vol. 8 (4):2850-2853.

Upadhyay, N. K., Ratan, V., Chandra, S., Yadav, V. K., Kumar, A., Awasthi, D. And Rai, J. P. (2019). Management of White Mold Fungus *Sclerotinia sclerotiorum* (Lib) De Bary causes disease in tomato under *In vitro* conditions. *International Journal of Current Microbiology and Applied Sciences* 8 (8): 2733-2743.

Upadhyay, A.L., Rajpoot, S.K.S., Prakash, N., Singh, R.A and Kumar, T (2020) "Evaluation of combination fungicide on leaf blast, neck blast disease and yield economics analysis of Rice in Eastern U.P". *Int. J. Curr. Microbiol. App. Sci.* Special Issue (10) 144-150

Verma H.C., Singh R.K., Kumar Rajesh, Ramakant and, Diwaker R.P. "Knowledge of Dairy Farmers and Incidence rate of Reproductive Disorder in Dairy Animal under Field condition in Eastern plain Zone of Uttar Pradesh, India" (2020), *Journal of Entomology and Zoology Studies* E-ISSN-2320-7078, 2020:8(2):1352-1356

Verma, D.K., Giri, S.P., Verma, S., Singh, R.P., Rajpoot, S.K.S., Singh, P., Singh A. K., Prakash, N and Dwivedi, D.K., (2020) "Impact of double-transplanting (Sanda) on yield and profitability of rice in eastern Uttar Pradesh". *Int. J. Curr. Microbiol. App. Sci.* special issue (10):222-228

Verma, D.K., Singh P. K., Verma, Saurabh, Giri, S.P., Singh, R.P., Singh, R.B., Singh D.P. and Singh, A.K. Chemicals weed control management in aerobic rice IJCS 2019; SP6: 121-123.

Verma, D.K.; Verma, Saurabh; Giri, S.P.; Singh, P.K., Singh, R. P.; Singh, Singh, R.B.; D.P. Singh; Maurya M.L. and Singh, A. K. (2019). Effect of nitrogen on scented short grain rice in irrigated system of east plan zone of Uttar Pradesh IJCS 2019; SP6: 354-355.

Verma, C.S. and Shiva Nath (2019). Studies on farm structure, cropping intensity, cropping pattern, pattern of resources and cost of return in wheat cultivation of different size of farm. *Progressive Research-An International Journal* 14(3):302-308 (NASS Rating-3.84), ISSN-0973-6417.

Yadav, A.; Joshi, R.K. and Joshi, N. (2019) Occurrence of Extended spectrum β lactame producing Enterobacteria in animal products and their environment. *Int. J of Curr. Microbiol.. App. Sci.* 8 (5): 2255-2264

Yadav, D. K., Singh, S. V., Ramakant, Singh, J. P., Singh, N. K., Verma H. C. and Diwaker, R. P. (2020). Health attribute profile of goat of Vindhyan zone of Eastern Uttar Pradesh, India. *Journal of Entomology and Zoology Studies*, 8(3): 806-810.

Yadav, R., Singh, J. P., Singh, S. V., Ramakant, Singh, N. K. and Yadav, V. (2020). In vitro Efficacy of *Embllica officinalis* against MRSA Isolated from Buffaloes Suffering from Subclinical Mastitis. *Journal of Animal Research*, 10(2): 281-289.

Yadav, R.D.S.; Purushottam; Gupta, M.; Bhati, J. and Yadav, P. (2019). Diagnostics characteristics of field pea varieties. *International Journal of Chemical Studies*, 7(4):1701-1702.

Yadav, R.D.S.; Purushottam; Gupta, M.; Bhati, J. and Yadav, P. (2019). Diagnostics characteristics of field pea varieties. *International Journal of Chemical Studies*, 7(4):1701-1702.

B. BOOKS

A textbook of Animal Biochemistry by S. K. Maurya and Poonam (2019). Kalyani Publications, New Delhi. ISBN: 978-93-5359-920-1

Sushil Kumar Choudhary & Pramod Kumar Mishra (2020) "Automobile Engineering", Rudra Publication, Bilashpur, And ISBN: 978-93-899-380-29.

Sushil Kumar Choudhary & R.S. Jadoun (2019) "Inconel Types superalloy Materials, LAP LAMBERT Academic Publishing is a trademark of: Omni Scriptum GmbH & Co. KG, Saarbrücken, Germany, And ISBN: 978-620-0-09504-6.

Sushil Kumar Choudhary & Padam Singh (2020) "Introduction: Optimization and Metaheuristics Algorithms", Metaheuristic and Evolutionary Computation: Algorithms and Applications, Springer Nature Singapore Pte Ltd. ISBN: 978-981-15-7571-6.

Uttara Singh and Sadhna Singh (2019). National Nutrition Policy for Health and Food Safety. In book sustainable development through food and nutritional security. ISBN: 978-93-88928-95-5 (HB).



C. LEAD / TECHNICAL PAPERS

Jaiswal, S. and Gupta R. K. (2019). First Aid for Wounds and Fracture in Pet Animals during Disaster, in Compendium of One Day Workshop on “Capacity Building in Disaster Management for Veterinary Students under ICAR NAHEP-IG project on 04.11.2019 at College of Veterinary Science, ANDUAT, Kumarganj, Ayodhya, pp-33-37.

Jaiswal, S. and Gupta R. K. (2020). Principles of Veterinary Hospital Management, in Compendium of Three Day Refresher Training Program on “Capacity Building of Veterinary Officer for Effective Delivery of Critical Services” on 11-13 Feb, 2020 at College of Veterinary Science, ANDUAT, Kumarganj, Ayodhya sponsored by UP Veterinary Council, pp-40-45.

Jaiswal, S. Singh, J. P. and Singh, H. N. (2019). Management of Human Wildlife Conflict Related wounds in Wild Animals, in Compendium of Three Day Capacity Building Workshop on “Addressing Human Wild Life Interface Issues” under ICAR NAHEP-IG project on 22-24.10.2019 at College of Veterinary Science, ANDUAT, Kumarganj, Ayodhya, pp-71-75.

Maurya, S. K. and Srivastava, Sushant (2019). Advanced molecular techniques in livestock disease diagnosis. National Seminar on “Recent tools & techniques to enhance productivity for sustainable rural development” organized at CVSc & AH on February 19th & 20th, 2019. Pp: 26-30.

Singh, J. P., Jaiswal, S., Singh, N. K., Ramakant, Singh, S. P., and Sengar, S. S. (2019). Vaccination of Wild Carnivores: The Best Human Intervention, in Compendium of Three Day Capacity Building Workshop on “Addressing Human Wild Life Interface Issues” under ICAR NAHEP-IG project on 22-24.10.2019 at College of Veterinary Science, ANDUAT, Kumarganj, Ayodhya, pp-76-80.

Singh, N. K., Singh, J. P., Ramakant, Jaiswal, S. and Singh P. (2019). Barasingha- The State Animal of UP, in Compendium of Three Day Capacity Building Workshop on “Addressing Human Wild Life Interface Issues” under ICAR NAHEP-IG project on 22-24.10.2019 at College of Veterinary Science, ANDUAT, Kumarganj, Ayodhya, pp-60-62.

Singh, S. V., Singh, J. P., Maurya, S. K., Ramakant, Singh, N. K., and Jaiswal, S. (2019). Capture Myopathy: A Life Threatening Episode, in Compendium of Three Day Capacity Building Workshop on “Addressing Human Wild Life Interface Issues” under ICAR NAHEP-IG project on 22-24.10.2019 at College of Veterinary Science, ANDUAT, Kumarganj, Ayodhya, pp-68-70.

Singh, S. V., Singh, J. P., Ramakant, Jaiswal, S., Sengar, S. S., Gupta R. K. and Niyogi, D. (2019). Role of NGOs in Disaster Management, in Compendium of One Day Workshop on “Capacity Building in Disaster Management

for Veterinary Students under ICAR NAHEP-IG project on 04.11.2019 at College of Veterinary Science, ANDUAT, Kumarganj, Ayodhya, pp-24-32.

Singh, S. V.; J. P. Singh; S. K. Maurya; Ramakant; N. K. Singh and S. Jaiswal. (2019). Capture Myopathy: A life threatening episode. Capacity Building Workshop on “Addressing human wildlife interface issues” organized at CVSc & AH on October, 22-24, 2019. Pp: 68-70.

D. POPULAR ARTICLES

S. K. Pandey, P. K. Mishra and S K Pandey 2020. कम कीमत वाले पाली हाउस की उपयोगिता बेमौसमी सब्जी उत्पादन में. राष्ट्रीय कृषि, खंड 15, भाग - I, pp.75-76.

S. K. Pandey, P. K. Mishra, S K Pandey, V Kumar and Vimlesh Kumar 2020. पाली हाउस के अंदर मिस्टिंग और फॉगिंग प्रणाली का उपयोग . स्टार कृषि, खंड VII, अंक VIII pp. 10-12.

S. K. Pandey, P. K. Mishra, S K Pandey and M P Tripathi 2020. ट्रैक्टर का समय-समय पर रख रखाव. स्टारकृषि, खंड VII, संयुक्तंक XI-XII pp.8-10

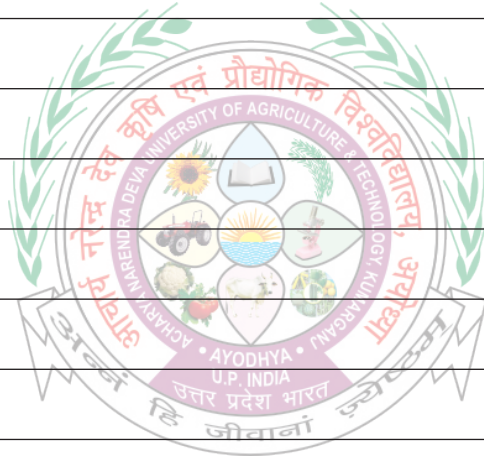
S. K. Pandey, P. K. Mishra and S K Pandey 2020. ड्रिप सिंचाई प्रणाली का रख-रखाव. राष्ट्रीयकृषि, खंड 15, भाग I pp. 61-62.

S. K. Pandey, P. K. Mishra and S K Pandey 2020. जीरो बजट खेती. राष्ट्रीयकृषि, खंड 15, भाग I pp.37-38.

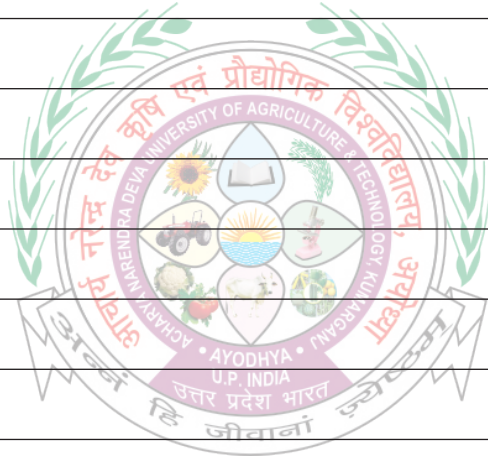
Pankaj Kumar Maurya; S. K. Maurya; P. K. Choudhary and Pramod Kumar (2020). पशुओं में तापघात: कारण, लक्षण एवं बचाव. कृषक आराधना. Issue 2020; April 13th to 19th, 2020; Page:11.

डा० पंकज मौर्या, डा० अजित कुमार वर्मा, डा० रविन्द्र कुमार, डा० रमाकान्त, डा० सचिन गौतम। पशु पोषण का रोग प्रतिरोधक क्षमता पर प्रभाव। मध्य भारत कृषक भारती। पृष्ठ संख्या: 81.

Notes



Notes





आचार्य नरेन्द्र देव कृषि एवं प्रौद्योगिक विश्वविद्यालय
Acharya Narendra Deva University of Agriculture and Technology

Kumarganj, Ayodhya-224229, UP

Website: www.nduat.org