



वार्षिक प्रतिवेदन
Annual
Report 2019-20

Bihar Animal Sciences University
Bihar Veterinary College, Patna - 14
www.basu.org.in

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☆ **Guidance**

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PREFACE

I am pleased to present you the Annual Report of Bihar Animal Sciences University (BASU) for 2019-20. The university is marching ahead charting the course of action. The University organized its first convocation on 15th October 2019. His Excellency the Governor of Bihar, Shri Phagu Chauhan presided over the function and Dr. Mangala Rai, former Director General, ICAR delivered the Convocation Address. Degrees and medals were conferred on students from Bihar Veterinary College and Sanjay Gandhi Institute of Dairy Technology.

We are in the process of creating new infrastructure. The new Library Building has become operational. The library has ample space for readers and for holding of books and journals and computer terminals for the cyber-library section. The cyber-library section is also equipped with modern language learning software and will double up as language lab and cyber-library. I thank the Building Construction Department, Govt. of Bihar for completing the building work and officials from Estate & Library at BASU, who made the building operational on priority. New space has been provided to the Finance Wing on the top floor of the newly constructed library building. The finance wing has approximately 3500 sq. ft. floor area. All the units under Comptroller have been placed under one roof, for efficient management of financial matters. The payroll for all staff of university has been computerised and all pension cases are being dealt with in time. Procurement of equipment and other goods is being done through government e-portal (Gem). To make transactions hassle free and cashless, fees from students are being received online through SBI Collect. Academic Management System called "Chanakya" by National Informatics Centre (NIC), Bihar has been implemented. It is a Web enabled, role based & work flow-based ICT solution to accomplish enrolment, registrations and examinations task. This could be possible with the installation of a robust local area cabled network and wifi across the campus.

The University is following the academic calendar right from admissions to declaration of results. The teaching and examination systems have been fully transformed and regulated with zero tolerance to absenteeism and ills of unfair means in the examinations. I am thankful to the student's community and the faculty of BASU for implementing the new

Preface



regulations in letter and spirit.

The year 2020 started well but soon the news of viral infection due to corona started coming in from China and as fears were expressed it spread globally in the form of a pandemic. All the countries had to take unprecedented measures to stop the infection from spreading to the masses. Lockdown, quarantine, contact tracing, wearing mask, hand sanitization, and social distancing became new normal. The students were asked to go to their homes and university campus almost deserted with bare minimum staff to run the essential services. Our university prepared itself to switch over to virtual mode of teaching by orienting the students and faculty to learn the nitty gritty of interactive video platforms for effective conduct of virtual classes, provide quality study material (Presentations, text material, MOOCs, virtual laboratory) for the students and give assignments, quizzes and conduct examinations. We also developed mechanisms for online interaction with farmers, youth and entrepreneurs.

Before lock-down we organized many seminars and workshops for students and faculty. Apart from the Annual Dog Show we also took a new initiative to organize the very first Cat Show on our campus. I am happy to share that we received a big response from cat lovers of Patna. The success of the Cat Show strengthened our belief that we need to reach out to the cat owners, create more awareness about cat health and management of cats as household pets. The Dog Show also marked the increasing popularity of the event. Many programs were successfully organized under the ICAR National Agricultural Higher Education Project. Internship of BVSc & AH final year students was continued by attaching them with different veterinary hospitals in the vicinity of the home towns of student.

At the end I look forward to control of the viral spread and return of normalcy at the earliest. I wish all students, staff and faculty good health and safety of their loved ones.

(Rameshwar Singh)

Chapter	Title	Page No.
	Executive Summary	I - III
1	Introduction	1 - 6
2	Education	7 - 17
3	Research	18 - 22
4	Extension	23 - 34
5	University Library	35 - 40
6	Events and Co-Curricular Activities	41 - 55
7	Faculty Development Programmes	56 - 61
8	Awards and Honours	62 - 64
9	Publications	65 - 72
10	Renovation and Maintenance Works	73 - 75
11	Construction of New campus	76 - 77
12	Livestock Farms	78 - 82
13	Distinguished Visitors	83 - 85
14	University Budget	86 - 87

Executive Summary

Bihar Animal Sciences University (BASU) was established on 29th of August 2016 by carving out Bihar Veterinary College and Sanjay Gandhi Institute of Dairy Technology, Patna from Bihar Agricultural University, Sabour. Govt. has transferred the Exotic Cattle Farm Patna, Central Poultry Farm, Patna, Government Buffalo Farm Sipaya (Gopalganj) and Tekna Goat Farm, Gaya also to this University to develop all these animal farms as research stations and training centres. College of Fisheries, Kishanganj was started as the third constituent college of this University in 2018.

Vision of BASU is to make it multi-faculty and students-centric so that resources of the University are utilized maximally. Mandate of the University is to impart quality education in veterinary science and animal husbandry, fisheries, dairy technology and allied sectors, and undertake basic and applied research and disseminate practical scientific knowledge to different stake-holders.

As per Act of BASU, different authorities of the University are Board of Management, Academic Council, Research Council, Extension Education Council and Board of Studies. Officers of the University govern administrative, educational, research and extension activities and overall functioning of the University as per provision in the Act and Statute of University.

During the year under report, three meetings of the Board of Management (September 28, 2019, October 14, 2019 and January 4, 2020) and three meetings of the Academic Council (October 14, 2019, January 3, 2020 and June 25, 2020) were held.

First Convocation of the University was held on October 15, 2019 in which the Convocation address was delivered by Dr. Mangla Rai, Former Secretary DARE, Govt. of India and Director General, ICAR, New Delhi and the Hon'ble Chancellor of BASU and Governor of Bihar presided over the function.

Director Extension Education, DRI-cum-Dean PGS and Dean, College of Fisheries, Kishanganj joined the University in January 2020.

Two Professors and 12 Assistant Professors joined in different departments of Bihar Veterinary College, Patna during the period under report.

Total budget of the University, which included financial support from Bihar Govt. for salary, infrastructure and contingency, funds received from other agencies for infrastructure development, research and extension projects and for the lone KVK of this University was, Rs. 70.9078 crore and the total receipt of the University from various sources was Rs. 1.089 crore.

Faculty strength in Bihar Veterinary College, Patna was 64, out of which 68.75% faculty members possessed Ph.D. degree while rest were M.V.Sc. Female and male percentage of faculty members was 14.5% and 83.5%, respectively; and out of total, 82% faculty members were from the home state while rest 18% were from other states.

Master's degree Programme (M.V.Sc.) is running in 16 disciplines and Doctoral Programme (Ph.D.) in nine disciplines in Bihar Veterinary College, Patna.

During the year under report, total 279 students (198 boys and 81 girls) were on roll in B.V.Sc.& A.H. degree programme, 40 (29 boys and 11 girls) in M.V.Sc. degree programme and 14 (10 boys and 04 girls) in Ph.D. programme. Number of pass-out students during the year was 57 which included 34 BVSc&AH and 23 MVSc.

20 B.V.Sc.& A.H. and 5 M.V.Sc. students qualified the ICAR JRF and SRF examinations, respectively, and based on these examinations, two students secured admission in M.V.Sc. programme and one in Ph.D. programme at IVRI, Izatnagar.

Compared to 2018-19, there was 49% increase in the number of clinical cases during 2019-20 and total 10,610 clinical cases were treated in Veterinary Clinical Complex. The Veterinary Experts of University also rendered all technical assistance to Sanjay Gandhi Biological Park, Patna in treatment of zoo animals.

College organized several animal health camps in nearby villages one dog-show and first-ever cat-show in

BVC, Patna premises on 7th and 8th of March 2020, respectively.

Several workshops, seminars, symposium and training programmes were organized including on intervention in wild-life diseases and management in captivity.

Faculty and students attended such programmes in on-line and off-line modes in other SAUs and ICAR institutes as well. Several faculty members and postgraduate students were awarded best research papers and best poster-presentation awards in conferences organized by different professional societies.

Orientation programme for the newly admitted B.V.Sc. & A.H. students of 2019 batch and Oath-taking ceremony for the passing-out students were organized on 11.09.2019 and 11.07.2019, respectively.

During the year under report, 89 students (70 boys and 19 girls) were on roll in B. Tech (DT) programme in Sanjay Gandhi Institute of Dairy Technology (SGIDT) and 22 students completed their B.Tech (DT) degree and one completed her M.Tech. degree.

Fifty seven students enrolled in different batches of B. Tech (DT) programmes completed their in-plant training and Student-Ready programmes in different milk plants and dairy organizations.

For quality improvement in teaching, six distinguished teachers from leading institutions were invited as Adjunct Professors during 2019-20.

Three B. Tech (DT) students secured admission in M. Tech. programme in NDRI, Karnal while three students took admission in BHU, Varanasi and one student in NIFTEM, Kundli, Sonapat, Haryana.

College of Fisheries had total 54 students on-roll in B.F.Sc. programme, out of which 25 were girl students and 29 boys.

Orientation programme for the newly admitted 2019 batch students in college of Fisheries was organized on February 5, 2020. College week “TARANG” was organized from February 18 to 23, 2020, Hindi-Diwas celebrated on September 14, 2019 and the World Environment Day on June 5, 2020.

Students along with faculty members were actively involved in Van Mahotsav programme and Jal-Jeevan-Hariyaali Campaign organized by Government of Bihar.

Three research laboratories having modern scientific equipment were established to strengthen teaching and research activities in College of Fisheries.

College collected 312 fish specimens from Mahananda river which tentatively represented 34 different species of fish.

University library was shifted to the new building and it has been changed from traditional library to modern library by adopting ICT for automation. Users have free access to large number of on-line scientific journals available on “Consortium of e-Resources in Agriculture”. BASU library has been digitized and also made available its old/rare collection on Krishi-kosh. The Library has also implemented KOHA Library Automation Software.

Twelve externally funded projects dealing with infrastructure development, experiential learning and research and twelve institutionally funded research projects were in progress. Under these projects, the laboratories were strengthened by adding Semi-Automatic Nitrogen Analyser in Department of Animal Nutrition, Paneer processing unit in Department of LPT, Rota Rod and Cook's Pole Climbing Apparatus in Experimental Pharmacology laboratory, and Biosafety cabinet and Autoclave in Department of Pharmacology & Toxicology, PCR machines in Departments of Medicine and Microbiology and some minor equipment in the Disease Diagnostic laboratory in Veterinary Clinical Complex to augment research activities.

BVC Patna published 52 research papers and six books while the faculty of SGIDT published 10 research papers, 10 popular articles and one book and College of Fisheries published five popular articles.

Under NAHEP-IG project, four teachers of BVC, Patna were deputed for international training of one month duration each to USA and New Zealand. In addition, several on-line and off-line workshops, webinars and conferences were also organized.

With funding from Department of Fisheries, Animal Husbandry and Dairying, Govt. of India an “Embryo Transfer Technology (ETT)” laboratory was established under “Rashtriya Gokul Mission” to promote indigenous cows.

University is in the process of setting up Regional Research Stations and training centres buffaloes farm at Sipaya, goat farm at Tekna, Gaya and poultry farm at Patna.

Livestock Farm Complex of BVC has cattle unit in which Sahiwal, Bachhaur, Red Sindhi, Jersey-cross and HF-cross animals are being maintained. Buffalo unit has Murrah and Nili-Ravi buffaloes. Black Bengal and Sirohi goats and crosses of Sonadi and Corridal sheep are being maintained in goat and sheep units.

In addition to the feed preparation and vermi composting units, University has 23 acres fodder production unit for green fodder production.

Directorate of Students Welfare looked after student's welfare issues including maintenance of hostels, and facilities for sports, cultural and literary activities, NSS, NCC, Career counselling and Placement Cell.

Directorate organized Independence Day, Republic Day, University Foundation day, Swami Vivekanand Jayanti, 150th Birth Anniversary of Mahatma Gandhi, Inter-College Cultural & Literary Competition, National Science Day and World Environment Day.

“Talk on Stress Management”, “Talk on Public Speaking”, and on-line gala singing evening, World Zoonosis Day, Van-mahotsava, Swachchhata Pakhwara, Rally on “Say No to Use of Plastic Bags”, World AIDS Day, participation in Human Chain for Jal-Jiwan-Hariyali mission, International Yoga Day etc. were some of the highlights of activities and programmes organized by the Directorate.

Directorate of Extension organized 10 different training programmes on “Advanced Goat Farming, Commercial Animal Husbandry and Management of Animals in Emergency” in which 334 farmers/livestock owners were trained.

In adopted villages, named as 'Poultry-Gram' and 'Goat-Gram', training and awareness programmes were organized for promotion of “Backyard Poultry” and goat-farming. Chicks of 'Vanjara' and “Gram Priya” were distributed to resource-poor farming community. 200 farm-families belonging to 'Tharu Tribes' at Ram Nagar in West Champaran were provided 'Vanjara' and quail chicks as part of research project funded by ICAR. New Delhi.

On-line training for poultry farmers, on-line meeting of fish-farmers, one-day workshop-cum-training programme on management of 'Wetland Fisheries, on-line training programmes for livestock farmers and field veterinary officers of the state were some other extension activities undertaken by the Directorate besides animal health camps and participation in Kisan Melas and related exhibitions..

Krishi Vigyan Kendra, Jamui organized 64 training programmes in which 1574 persons were trained in different training modules. Three different OFT programmes and FLDs were undertaken and based on these, final recommendations were provided to farmers for better agricultural practices. KVK scientists also organized field days, kisan goshties, kisan chaupals and several other awareness programmes.

Master-plan for construction of the new campus has been finalized and construction work has been entrusted to Building Construction Department of Govt. of Bihar. Proposed new campus of the University will have total build-up area of around 1.92 lac square meter and the estimated cost of the project is Rs. 889.26 cores. It has been designed to make 'Green Campus' and the buildings are energy efficient, eco-friendly with zero discharge. Main buildings have been designed with base-isolation to be earth-quake resistant. The construction work of new buildings is likely to start during 2021.

1

Introduction

About the University

Bihar Animal Sciences University (BASU) was established by Government of Bihar with its headquarter at Patna vide Act No. 15 of 2016 and notified on 29th of August 2016 in Bihar Gazette. This University was carved out from Bihar Agricultural University, Sabour by transferring two of its Patna located constituent colleges, namely- Bihar Veterinary College and Sanjay Gandhi Institute of Dairy Technology. A new College of Fisheries was established at Kishanganj in 2018. Apart from the three main constituent Colleges, Govt. of Bihar has transferred Exotic Cattle Breeding Farm Patna, Central Poultry Farm Patna and Government Buffalo Farm Sipaya (Gopalganj) as well to this University to expand the horizon of University, and strengthen research and extension activities for effective outreach to different stake-holders, especially resource poor farmers and livestock owners.

University is located close to Jai Prakash Narayan International Airport, Patna, therefore, has the advantage of excellent air and rail-connectivity to important cities and town.



Proposed Administrative building of BASU



Bird eye view of the proposed campus of BASU

The basic objectives of University are to impart quality education in Veterinary Sciences and Animal Husbandry including poultry, fisheries, dairy technology and allied subjects to promote advancements in learning, undertake basic and applied research, and render extension services in an endeavour to make these sectors of rural economy as sustainable sources of self-employment and social empowerment for poverty alleviation. University is also striving to establish partnerships with national institutes, different State agricultural universities, industry and other entities working in the field of animal husbandry, fisheries, dairying and allied sectors.

1.1 Mandate of the University:

- To impart quality education in Veterinary Science & Animal Husbandry including poultry, fisheries, dairy technology and allied sectors; and facilitate an organized process of life-long learning;
- To undertake basic and applied research on various aspects of animal health and production, dairy fisheries and allied sectors;
- To undertake extension activities to disseminate practical scientific knowledge related to veterinary and animal sciences, fisheries and dairy technology to ultimate stake-holders especially rural masses to promote these sectors as sustainable source of rural economy;
- To facilitate and ensure qualitative and continuous improvement in teaching and learning processes and impart hands on training to graduate and postgraduate students;
- To develop linkage and partnership with industry and other entities working in areas of animal sciences, fisheries and dairy technology.
- To render quality diagnostic and treatment services to animal owners in Super-Specialty Veterinary Hospital;
- To impart hands on training and undertake capacity building and skill-development programmes for field veterinarians in state of the art veterinary hospital and diagnostic laboratories; and
- Such other purposes as envisaged by the University or Government from time to time.

1.2 University Functioning

As per Act of BASU, following authorities and bodies of the University govern and regulate the administrative, educational, research and extension activities and overall functioning of the University:

- Board of Management
- Academic Council
- Research Council
- Extension Education Council
- Director Resident Instruction -cum-Dean Post Graduate Studies

- Directorate of Students' Welfare
- Board of Studies

Governing bodies of the University

Board of Management (BOM): It is the apex administrative body that approves, regulates and advises the University administration about various activities and functions pertaining to financial matters, management of assets, appointment of officers, faculty and staff of the University, advises and approves the recommendations of statutory authorities and committees constituted for the purposes, and policies and activities of the University including academic matters like admissions, examinations, fee-structure, designing and adoption of course curricula, starting of newer academic programmes, students intake capacity in different academic programmes, and all other issues related to functions after approval of the Academic Council or other statutory bodies of the University.

Members of Board of Management

- Vice-Chancellor - Ex-officio Chairman
- Principal Secretary/Secretary, Department of Animal and Fisheries Resource of the State Government.
- Principal Secretary/Secretary, Department of Finance of the State Government or his nominee.
- Principal Secretary/Secretary, Department of Agriculture of the State Government.
- Director, Animal Husbandry, Department of Animal & Fisheries Resource of the State Government.
- Director, Fisheries, Department of Animal & Fisheries Resource of the State Government;
- Director, Dairy Development, Department of Animal & Fisheries Resource of the State Government;
- Two eminent educationists/scientists from the field of Veterinary and Animal Sciences to be nominated by the Chancellor.
- One progressive farmer from the jurisdiction of the University nominated by the State Government.
- One distinguished agro-industrialist nominated by the State Government.
- One outstanding woman social worker having background of rural advancement nominated by the State Government.
- One representative from the Indian Council of Agricultural Research either from Education Division or Animal Science Division nominated by the Council.
- One Director in rotation nominated by the Vice-Chancellor.
- One Dean faculty in rotation nominated by the Vice-chancellor.
- The Vice-Chancellor is the ex-officio Chairperson and Registrar is the non-member Secretary to the Board. The term of office of the members of Board other than the ex-officio members is three years.

Academic Council

Academic Council of the University considers, recommends/approves and regulates the for different academic programmes being offered by the University including intake capacity in each academic programme, course curricula, examination reforms, award of degrees and certificates including honorary degrees, award of fellowships, medals, and stipends for UG and PG students. It also approves the recommendations of Board of Studies of different Faculties along with academic programmes and issues pertaining to fee to be charged for different academic programmes.

Dr. Rameshwar Singh	VC BASU	Ex-officio Chairman
Dr. Veer Singh	DRI-cum-Dean PGS	Member
Dr. Ravindra Kumar	Director Research	Member
Dr. A. K. Thakur	Director of Extension Education	Member
Dr. J. K. Prasad	Dean BVC	Member
Dr. A. K. Thakur	Dean SGIDT	Member
Dr. Ashok Kumar	ADG (Animal Health) ICAR Nominee	Member
Dr. K. G. Mandal	Professor and Head (VC's Nomine)	Member
Dr. Sanjeev Kumar	Associate Professor (VC's Nomine)	Member
Dr P. K. Kapoor	Registrar (up to 22.06.2020)	Member Secretary
Dr. S.K Garg	Registrar (29.10.2020 onwards)	Member Secretary

Research Council

Research Council of the University steers, coordinates and monitors all scientific research activities in the University including identification of priority and thrust areas of research. It monitors and regulates all the ongoing research projects and research activities including liaison with the outside funding agencies to seek financial assistance for extramural sources through Director Research. In addition, it also provides need-based funds for important intramural research proposals. Mandate of the Research Council is:

- i. To identify and prioritize the need-based research programmes keeping in view the interests of farmers and livestock-owners of the state as well as in national perspective;
- ii. To give physical, fiscal and administrative approvals and facilities required for implementing research projects;
- iii. To effectively integrate research, extension education and teaching programmes and coordinate involvement of research workers in teaching and participation in extension education programmes;
- ii. Any other matter pertaining to research programmes which may be referred by the Vice-Chancellor or the Board or any other authority of the University or the State Govt.

Members of Research Council:

1. Vice Chancellor, Ex-officio Chairman
2. Director Resident Instruction
3. Director Extension Education
4. Director Animal Husbandry, Govt. of Bihar, Ex Officio Member

5. Director Dairy, Govt. of Bihar, Ex Officio Member
6. Director Fisheries, Govt. Of Bihar, Ex Officio Member
7. Director Agriculture / Chief Conservator of forest, Govt. Of Bihar, Patna
8. Dean, Bihar Veterinary College.
9. Dean, Sanjay Gandhi Institute of Dairy Technology.
10. Dean, College of Fisheries, Kishanganj
11. All Heads of Departments
12. All University Professors and Chairmen of Centres
13. Two eminent Scientists nominated by the Vice Chancellor
14. Four Co-opted Members
15. Director Research, BASU, Patna, Ex-officio Member Secretary

Extension Education Council

Extension Education Council of the University coordinates and approves different extension activities and programmes of the University. It also acts as an interface between teaching, research and development programmes and establishes linkage with the line departments of state Govt. as well as centre and devises ways and means to effectively implement all extension education programmes of the University.

Members of Extension Education Council

1. Vice Chancellor -Ex-officio Chairman
2. Director Animal Husbandry, Govt. of Bihar, Ex Officio Member
3. Director Dairy, Govt. of Bihar, Ex Officio Member
4. Director Fisheries, Govt. Of Bihar, Ex Officio Member
5. Director Resident Instruction
6. Director Research
7. Dean BVC
8. Dean SGIDT
9. All Heads of Department, BVC, Patna
10. All Heads of Department, SGIDT, Patna
11. All Heads, Regional Research Centres
12. Two eminent persons in the field of extension education, nominated by Vice Chancellor
13. Three progressive farmers nominated by Vice Chancellor
14. Representative from Rural Development Department, Govt. of Bihar
15. Representative from Co-operative department
16. Project Director, Bihar Livestock Development Agency (BLDA), Patna
17. Director Extension Education, Ex-Officio Member secretary

Meetings of Board of Management and Academic Council

Board of Management

- 2nd meeting of the Board of Management held on 28th September, 2019.
- 3rd meeting of Board of Management held on 14th October, 2019.
- 4th meeting of Board of Management held on 4th January, 2020.

Academic Council

- 5th Meeting of the Academic Council held on 14th October, 2019.
- 6th Meeting of the Academic Council held on 3rd January, 2020.
- 7th Meeting of the Academic Council held on 25th June, 2020.

1.3 Appointments of Senior Officers in the University

Sl. No.	Name of the Officers	Post	Date of appointment
1	Dr. Veer Singh	DRI-cum-Dean PGS	10.01.2020
2	Dr. A.K. Thakur	Director Extension Education	10.01.2020
3	Dr. V.P. Saini	Dean, College of Fisheries, Kishanganj	10.01.2020

1.4 Appointments of University Professors in Bihar Veterinary College, Patna

Sl. No.	Name	Post	Date of appointment
1	Dr. Ajeet Kumar	University Professor-cum-Chief Scientist, Veterinary Gynaecology and Obstetrics	22.01.2020
2	Dr. Shankar Dayal	University Professor-cum-Chief Scientist, Animal Genetics and Breeding	22.01.2020

1.5 Appointments of Assistant Professors in Bihar Veterinary College, Patna

Sl.No.	Name	Department
1	Dr. Sonam Bhatt	Veterinary Medicine
2	Dr. Vivek Kumar Singh	V.C.C.- Veterinary Medicine
3	Dr. Bhumika	Veterinary Public Health
4	Dr. Pramod Kumar	L.F.C.- Animal Nutrition
5	Dr. Suchit Kumar	L.F.C.- Animal Genetics and Breeding
6	Dr. Gargi Mahapatra	Livestock Products Technology
7	Dr. Rohit Kumar Jaiswal	Livestock Products Technology
8	Dr. Pushpendra Kumar Singh,	Veterinary Extension Education
9	Dr. Shailendra Kishore Sheetal	Veterinary Gynecology and Obstetrics
10	Dr. Alok Kumar	Veterinary Gynecology and Obstetrics
11	Dr. Bhavna	Veterinary Gynecology and Obstetrics
12	Dr. Dushyant Yadav	L.F.C. - Veterinary Gynecology and Obstetrics

1.6 Research Institutes and Stations transferred to University:

Following establishments of the Department of Animal Husbandry, Govt. of Bihar are under different phases of transfer to this University:

1. Exotic Cattle Breeding Farm, Patna
2. Central Poultry Farm, Patna
3. Government Cattle Farm, Gaya
4. Government Buffalo Farm, Sipaya (Gopalganj)



Education

2.1 Constituent Colleges of the University

2.1.1 BIHAR VETERINARY COLLEGE, PATNA

Bihar Veterinary College, Patna, the 5th oldest Veterinary College of undivided India, was established on 2nd April, 1927 by Sir Henry Wheeler, the then Governor of Bihar & Orissa. Although the College started functioning from 7th April, 1927, but the academic programme was started in 1930 after construction of the College buildings, equipping of laboratories and joining of teaching and other supporting staff. However, Bihar Veterinary College developed to its full capacity during post-independence period and attained prestigious status due to teaching and research activities as well as advanced veterinary clinical services to society. The College had one of the best Tharparkar cattle herd, Central Poultry Farm and many Livestock Research Stations under its ambit.

Bihar Veterinary College, Patna provided quality veterinary education and training to candidates from Bihar and Orissa and several other states of the country and also from many developing countries like Nepal, Bhutan, Afghanistan, Iran, Malaysia etc. Graduates of this College are spread in different countries and have occupied coveted and prestigious positions. Dr. C. M. Singh, Dr. B. S. Rajya, Dr. G. C. Mohanty, Dr. O.N. Singh, Prof. A. Ahmad, Dr. H. R. Mishra, Dr. R. B. Prasad, Dr. V. S. Pandey, Dr. D. V. Singh, Dr. G. Biswal, Dr. D. C. Nayak have been some of the distinguished alumni of this prestigious College. The first batch of regular degree holders, admitted in 1949, came out in 1953 and became the stake holders of livestock and poultry resources of India in general and Bihar and its neighboring states in particular.



For award of the diploma (1930-1949) or degree thereafter, Bihar Veterinary College, Patna had been affiliated to different Universities of Bihar like Patna University (1930-1952), Bihar University (1952-1962) and Magadh University (1962-1971). Postgraduate degree programme leading to award of Master's in Veterinary Science in different subjects of Veterinary Science and Animal Husbandry was started in 1960. After establishment of Rajendra Agricultural University (RAU), Pusa under Bihar Agricultural University Act (1971), Bihar Veterinary College, Patna became one of the constituent colleges of RAU, Pusa and this college started functioning under Agricultural University System. Later, on 5th August 2010, after establishment of Bihar Agricultural University (BAU), Sabour (Bhagalpur), Bihar Veterinary College, Patna became the constituent college of BAU, Sabour. Bihar Animal Sciences University (BASU), Patna came into existence as per Bihar Animal Sciences University Act, 2016 and Bihar Veterinary College, Patna became the main constituent College of University.

The College has 16 well equipped departments as per MSVE Regulations 2016 of Veterinary Council of India. College also has well equipped Veterinary Clinical Complex and Livestock Farm Complex housing different species of animals for teaching and research purposes.

All the departments have adequate infrastructure and laboratory facilities for undergraduate and postgraduate teaching and research. Well-equipped Veterinary Clinical Complex is a super-specialty referral veterinary polyclinic and caters the need for advanced animal diagnostics and treatment of domestic, companion and zoo animals. Livestock Farm Complex of the College houses cattle, buffaloes, sheep, goats and poultry for teaching and research purposes. College imparts instructions for award of BVSc and AH degree as per VCI curriculum and MVSc and PhD degrees in 16 different disciplines as per ICAR curriculum.

One new academic building has been handed over to Bihar Veterinary College during the year under report and three departments, namely- Veterinary Pharmacology and Toxicology, Veterinary Physiology and Veterinary Biochemistry have been shifted to this new academic block.

Faculty Strength

The total faculty strength in BVC during the year under report was 64; out of these, 68.75% possessed Doctorate degree while rest (32.25 %) possessed only Master's degree. Out of the Doctoral degree-holders, 52.3% have acquired their respective degrees from national institutes (IVRI and NDRI), while rest of the faculty members have completed their PhDs from SAUs located in other states. Presently, percentage of female and male faculty members in BVC is 14.5% and 83.5%, respectively. Out of the total faculty strength, 82% faculty members are from the home state (Bihar) while 18% are from other states. During the year under report, twelve newly recruited Assistant Professors joined in different departments of the College.

Teaching Veterinary Clinical Complex

Teaching Veterinary Clinical Complex (TVCC) of College is the centre for imparting hands on professional training to undergraduate and postgraduate students and for providing diagnostic and expert veterinary clinical services. Veterinary Clinical Complex has most of the diagnostic facilities which include X-ray, Ultrasonography and clinical pathology laboratory for routine microbiological, blood, faecal, milk and urine examination and critical care unit for dogs and cats, dental care unit, small and large animals OT etc.

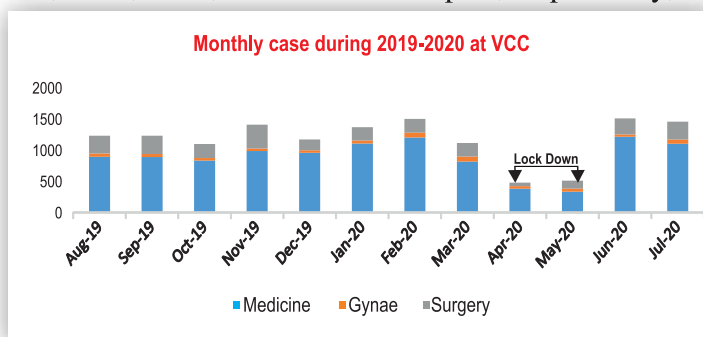


Arrangement for handling emergency clinical cases round the clock through “Doctor on Call System” has also been ensured. Our VCC is registered with the Health Department of Govt. of Bihar for lawful use of ultrasonography machines for diagnostic purposes in animals under PNDT Act 1984. During the year under report, indoor wards for cattle and buffaloes, dogs, sheep, goats and equines have been extensively renovated for better indoor facilities for sick animals. Veterinary Clinical Complex has also been registered with IGIMS, Patna (Reg. No. CBWTF/832) for proper disposal of biomedical waste.

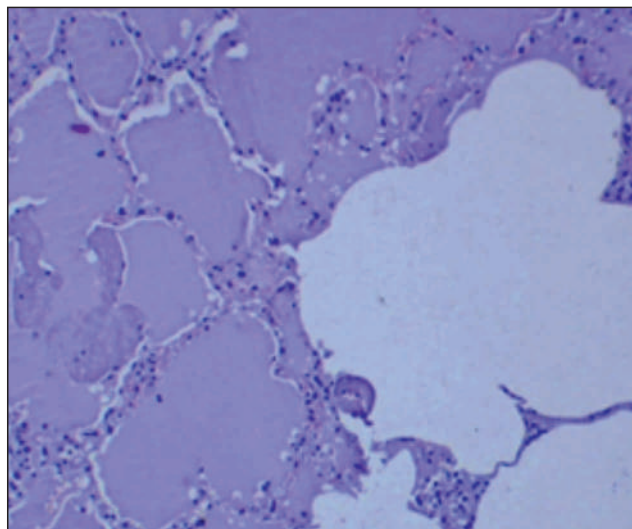
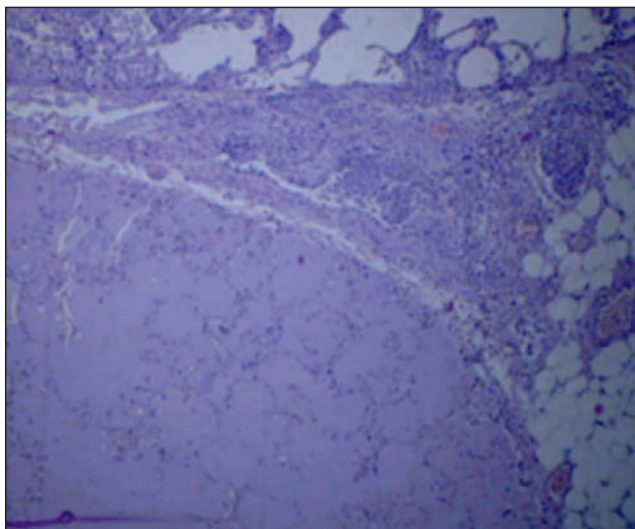
During the year under report, total 10, 610 clinical cases were treated in Veterinary Clinical Complex and compared to 2018-19, there was 49% increase in number of clinical cases.

During the year 3,597 clinical biological samples (blood, urine, faeces, milk, skin scrapings) were received in Disease Diagnostic Laboratory of VCC. Out of these, 1132, 1532, 747 and 186 samples, respectively, were subjected to pathological, parasitological, biochemical and microbiological examinations.

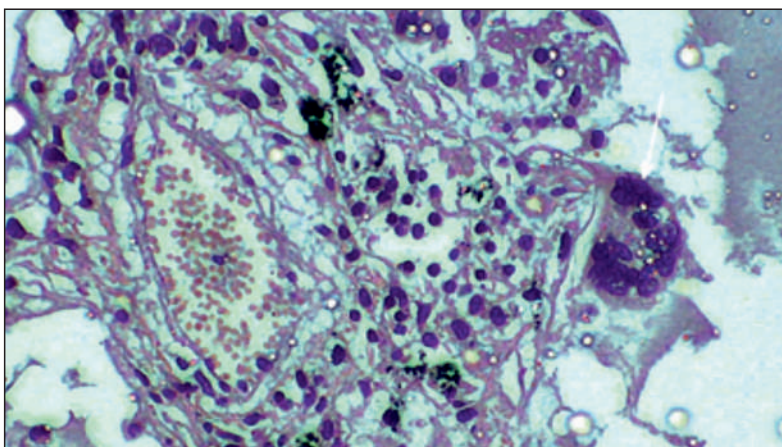
Teachers of the Teaching Veterinary Clinical Complex also rendered expert animal health care services to Sanjay Gandhi Biological Park, Patna. During this period, scientists of BVC also conducted the post mortem examination of one



giraffe and based on the gross lesions and histopathological examination, cause of death was found to be “pulmonary tuberculosis”. Histopathological examination which revealed thickening of bronchial wall with inflammatory cells, and the alveolar spaces were filled with edematous fluid along with infiltration of inflammatory cells with Langhan's giant cells. All these lesions are characteristics of pulmonary tuberculosis and oedema.



Lung sections of Giraffe showing multiple small and large tubercle nodules and edematous fluid in alveolar spaces and infiltration of mononuclear cells .



Lung section of Giraffe showing infiltration of inflammatory cells with Langhan's giant cells characteristics of pulmonary tuberculosis in Giraffe (H& E Staining under high magnification;100X).

2.1.2 SANJAY GANDHI INSTITUTE OF DAIRY TECHNOLOGY, PATNA

Sanjay Gandhi Institute of Dairy Technology was sanctioned in 1980 under the umbrella of Rajendra Agricultural University, Pusa, Samastipur. First batch of undergraduate students in B. Sc. Dairy Technology programme was admitted in 1982 at Pusa. Subsequently, the Institute was shifted from RAU, Pusa to ARI, Mithapur, Patna in 1986 and finally to the present campus at Jagdeo Path, Patna in 1999. After bifurcation of RAU, Pusa in 2010, the Institute became the constituent College of Bihar Agricultural University, Sabour and later on, after establishment of BASU, Patna, it became the second constituent college of BASU in 2016.



The institute is well recognized by ICAR and offers B. Tech. (DT) and M. Tech. degrees in Dairy Technology, Dairy Chemistry and Dairy Microbiology. The Institute is running the academic programmes as per recommendations of ICAR. The Institute has produced more than 500 graduates who are serving in different capacities nationally and internationally. Dairy Technology students get placed in Dairy and Food industries and some of them are successful entrepreneurs in dairy farming and milk processing enterprises.

The Institute has a well-equipped computer centre with LAN internet connectivity. Staff rooms and various laboratories have also been provided with high speed internet connection through LAN and they use this for surfing net for academic activities, teaching, training, computation of data, report preparation etc. One new Computer Language laboratory has also been established in the Institute for enhancing the communication skills of students as per recommendation of the 5th Deans' Committee. Computer language software and supporting multimedia kits have been made available in the language lab.

Both off-line and on-line processes are being followed for teaching and monitoring of educational quality. Records of classes scheduled, attendance, teaching materials like notes and power point presentations of different courses/lectures, and results are being computed and monitored through Chanakya software, an Education Management System, developed and customized by NIC. On-line access to the information is available to Vice Chancellor, Registrar, Dean, faculty members and other competent authorities of the University.

Faculty Strength:

The sanctioned faculty strength of the Institute is 47, however, present faculty position is only 10 as summarized below:

Designation	Sanctioned Faculty	Faculty in place	Vacant Position	Faculty strength recommended by ICAR
Professor	3	1	2	5
Associate Professor	21	3	18	10
Assistant Professor	23	6	17	20
	47	10	37	35

Visiting Adjunct Professors

Six Adjunct Professors, namely- Dr. J. B. Prajapati, Prof. & Head, Dairy Microbiology, AAU, Anand, Dr. A. K. Puniya, Dean CODST, GADVASU, Ludhiana, Dr. Bimlesh Mann, J.D. (Research) NDRI, Karnal, Dr. G. R. Patil, former Head (DT) NDRI, Karnal, Dr. R. S. Dalal, former Prof. & Head, Veterinary and Animal Husbandry Extension, LUVAS, Hisar, and Dr. Y. S. Rajput, former Prof. and Head, Dairy Chemistry, NDRI, Karnal were appointed as adjunct Professors to guide and train the students and faculty, and also guide them in formulation of plans for upgradation and establishment of laboratories to undertake practicals and pursue research projects.

2.1.3 College of Fisheries, Kishanganj

College of Fisheries, Kishanganj is the third constituent college of Bihar Animal Sciences University Patna. Hon'ble Chief Minister of Bihar, Shri Nitish Kumar Ji, formally inaugurated and announced the start of first academic session of this College on 29th August, 2018. It is located in the campus of Dr. Kalam Agriculture College at Arrabari, about 22 Km away from the district town of Kishanganj and is situated on the banks of river Mahananda. The College of Fisheries is committed to become the Centre of Excellence in Fisheries education in the region and nurture the next-generation of professionals and entrepreneurs in fisheries sector and contribute to state and national economy by undertaking advanced research and innovations relevant to the local needs and in national perspective.



College of Fisheries, Kishanganj

The college is unique with its state-of-the-art infrastructure including centrally air-conditioned academic and administrative buildings with smart classrooms, modern laboratories, single-bedded hostel rooms for girls and boys, residential accommodation for faculty and staff, playground, indoor game facilities, health clinic, auditorium, well equipped gymnasium, farm offices, wet laboratory and 70 acres of farm land for construction of well-laid instructional and research farms with facilities for hatcheries and intensive aquaculture systems.

The College offers four years' degree programme leading to award of “Bachelor of Fisheries Science (B.F.Sc.) degree as per ICAR's 5th Deans Committee recommendations. Different departments in the College are under process of development and most of the laboratory facilities for undergraduate teaching of the first to third year students have already been created. University is in the process of establishing other laboratories as well.

College has the regular Dean and presently there are six Assistant Professors (Guest faculty) who are well qualified and having very good practical knowledge and exposure. Out of these, five are male teachers while one is female; four of the teachers are PhD and they have acquired their PhD degrees from ICAR-CIFE, ICAR-NBFGR and WBUVFS, Kolkata.

Department-wise sanctioned faculty positions

Department	Sanctioned Posts			
	Professor	Associate Professor	Assistant Professor	Total
Aquaculture	2	4	6	12
Aquatic Animal Health Management	1	2	4	07
Aquatic Environment Management	2	3	3	08
Fish Biotechnology	1	2	3	06
Fish Genetics and Breeding	1	2	3	06
Fish Nutrition and Feed Technology	1	2	3	06
Fish Physiology and Biochemistry	1	2	3	06
Fish Processing Technology	2	3	5	10
Fisheries Economics & Statistics	1	2	3	06
Fisheries Extension	1	2	3	06
Fisheries Resources Management	2	3	6	11
Total	15	27	42	84

1.2 Academic Programmes

2.2.1 Intake Capacity

Undergraduate Programmes

B.V.Sc.& A.H.: Intake capacity of the programme in Bihar Veterinary College, Patna is 60; out of which 85% seats are reserved for the domicile of Bihar and these seats are filled based on the merit of students in the National Eligibility Entrance Test conducted by National Testing Agency of Govt. of India and counselling done by Bihar Combined Entrance Competitive Examination Board (BCECEB) of Govt. of Bihar. Rest 15% of seats are filled from all India quota through Veterinary Council of India.

B. Tech. (D.T.): There are 30 seats in B. Tech. (D.T.) programme in Sanjay Gandhi Institute of Dairy Technology, Patna. Students in this programme are admitted from the merit list of Bihar State Combined Entrance Examination conducted by Bihar Combined Entrance Examination Board, Govt. of Bihar.

B.F.Sc: Permissible intake capacity in B. F. Sc. Degree programme in College of Fisheries, Kishanganj is 40, and presently all the forty seats are reserved for Bihar state domiciles.

Postgraduate Programmes

MVSc: Bihar Veterinary College has MVSc degree programme in all the sixteen teaching departments. Total intake capacity of the programme in College during 2019-20 was 33.

PhD: Bihar Veterinary College has PhD degree programme in eight teaching departments of this College and during the year under report, intake capacity of programme was eight.

S. No.	Name of the College	Intake Capacity in Different Programmes		
		Undergraduate Programme	Master's	PhD
1	Bihar Veterinary College, Patna	60	33	08
2	Sanjay Gandhi Institute of dairy Technology, Patna	30	N.A	N.A
3	College of Fisheries, Kishanganj	40	N.A	N.A
	Total	130	33	08

2.2.2 Students on-roll in different academic programmes

Academic Programme	Boys	Girls	Total
B.V.Sc.&A.H.	198	81	279
B. Tech. (DT)	70	18	88
B.F.Sc.	29	25	54
M.V.Sc	29	11	40
M.Tech. (DT)	00	01	01
PhD (Veterinary Sciences)	14	10	24
Total	340	146	486

2.2.3 Pass-out students

Academic Programme	No. of pass -outs
B.V.Sc.& A.H.	34
M.V.Sc.	23
B.Tech. (D.T.)	19
M.Tech. (DT)	01
Total	77

2.3 Student READY Programme:

In-plant Training of 18 students of B. Tech. D.T. 2016 batch was completed from September 2019 to January, 2020 in various plants of Gujarat such as Amulfed Dairy, Gandhi Nagar, AMUL, Anand, Palanpur Dairy, Patna Dairy Project etc.

Student READY Programme of 19 students of B. Tech. (D.T.) of 2017 batch was undertaken from 25th July 2019 to 1st of September 2019. After five weeks training, students were attached to different dairy plants viz. Vidya Dairy, Anand, Experimental Dairy, NDRI, Karnal, Patna Dairy Project, Patna and TIMUL, Muzaffarpur to learn various practical aspects of dairy processing and dairy plant management.

Apart from this, Student READY Programme of 20 students of B. Tech. D.T. 2018 batch was also completed from 25th July 2019 to 31.08.2019 and students were attached with Milk procurement societies of Nalanda Dairy, Patna Dairy Project, Samastipur Dairy, Samastipur and VIMUL, Bhagalpur.

2.4 Orientation programme for the newly admitted students

Orientation programme for the newly admitted students of BVSc and AH degree programme was organized on 11. 09. 2019. Dean, BVC, Patna welcomed all the newly admitted students and sensitized them about the course-curriculum and academic regulations of VCI for BVSc and AH degree programme. He also emphasized on the need for being regular in attending classes and about the examination and evaluation system, scope of the profession, do's and don'ts on the Campus etc.

As per academic calendar, orientation programme for the newly admitted students of B. Tech (D.T.) 2019-20 batch was organized in the Institute on 11th November 2019 to acquaint the students about the Institute and University, the academic programme, course curriculum, academic regulations and also about the scope of professional degree to which they have been admitted.

Orientation programme for the newly admitted 2019 batch students of College of Fisheries, Kishanganj was organized on 5th February 2020. This programme was graced by renowned researchers and academicians in the field of fishery sciences like Dr. P. Keshawnath, Dr. S. M. Shivaprakash, Dr. A. K. Reddy. Hon'ble Vice-Chancellor, Dr. Rameshwar Singh, presided over the programme. Other distinguished officers present on the occasion were Dr. R. K. Trivedi, DSW BASU and Dr. K. G. Mandal, OSD of the College of Fisheries.



Orientation Programme of the newly admitted B. V. Sc.& A.H Students of 2019 batch

2.5 Anti-ragging measures: All necessary measures were undertaken to ensure that there was no menace of ragging, both at the headquarter and also in all the three constituent Collages of the University through anti-ragging committees and anti-ragging squads. There was not even a single instance of any such occurrence.

2.6 Oath-taking Ceremony of B.V.Sc. & A.H. students

Oath-taking ceremony for the passing out students during the year under was organized on 11.07.2019 in which Dr. K.M.L Pathak, Ex-Vice Chancellor, DUVASU, Mathura was the Chief Guest. Thirty-four students of B.V.Sc.&A.H. degree and twenty MVSc degree recipients were administered the oath. Hon'ble Vice Chancellor, Dr Rameshwar Singh presided over the function. On this occasion, gold and silver medals were awarded in clinical and animal production subjects to Ms. Akriti Anna and Ms. Shruti Mishra respectively.



2.7 University Convocation

First convocation of the University was organized on October 15, 2019 in University premises. Hon'ble Chancellor of the University-cum-Governor of Bihar, Sh. Phagu Chauhan presided over the function. During the convocation, 54 students were awarded B.V.Sc. & A.H degree, 27 students B.Tech (DT) degree and 14 students M.V.Sc. degree. Dr. Rameshwar Singh, Hon'ble Vice Chancellor BASU, presented the University progress report and convocation address was delivered by Dr. Mangala Rai, Former Secretary DARE, Govt. of India and Director General, ICAR, New Delhi.



2.8 Students Performance in All India ICAR Joint Entrance Examinations

20 BVSc and AH and 5 MVSc students qualified the ICAR JRF and SRF examinations, respectively. Based on these examinations, two students secured admission in MVSc programme and one in PhD programme at IVRI, Izatnagar.

Three B. Tech (DT) students secured admission in M. Tech. programme in NDRI, Karnal while three students took admission in BHU, Varanasi and one student in NIFTEM, Kundli, Sonapat, Haryana.

Research

Directorate of Research coordinates research strategies and thrust areas of research in Veterinary and Animal Sciences, Dairy Science and Fisheries. Directorate envisages to set up Regional Training Centres for promoting poultry, buffaloes, goats and pig production through Central Poultry Farm Patna, Buffaloes and Pig Production Centre at Sipaya (Gopalganj) and Goat Production at Tekna, Gaya with the objective of imparting hands on training to rural youth including women on various aspects of animal husbandry and for ensuring supply of good germplasm of poultry, buffaloes, pigs and goats to promote all these species as a sustainable source of livelihood in rural areas.

University has also signed “Memorandum of understanding” with leading national institutes for research collaboration and plans to form a Regional Research Consortium comprising of medical and veterinary research institutes of the area to facilitate sharing of research facilities and other resources.

Directorate coordinates with the different faculties for preparation of good research proposals for funding from the outside agencies as well as University.

Research Activities and Achievements

Twelve externally funded experiential learning, infrastructure development and research projects and twelve institutional funded research projects, as per the details given below, have added strength to not only quality teaching but also research activities in the priority areas in the University.

A. On-going Externally Funded Experiential Learning and Infrastructure Development Projects

S No.	Title of the Project	Name of the Principal Investigator	Funding Agencies	Amount (Rs. in lakhs)
A. Experiential Learning Programmes				
1	Experiential Learning Unit- Critical Care Unit	Dr. Pallav Shekhar, Asstt. Prof., Veterinary Medicine	I.C.A.R., New Delhi	N.A.
2	Strengthening and upgradation of TVCC as Experiential Learning Unit for Pet animals	Dr. Gyan Dev Singh, Asstt. Prof., VCC	I.C.A.R., New Delhi	N.A.
B. Infrastructure Development Projects				
1.	National Agricultural Higher Education Project (Innovation Grant)	Dr. Ravindra Kumar, Director Research	I.C.A.R., New Delhi	145.0
2.	Establishment of Embryo Transfer Technology Centre	Dr. Ravindra Kumar, Director Research	D.A.D.F., Govt. of India	104.70
3.	FIST Programme – 2016	Dr. Ajeet Kumar, Asstt. Prof. Veterinary Biochemistry	D.S.T., New Delhi	92.5
C. All India Coordinated Research Projects (AICRPs) and other network projects				
1.	AICRP on Poultry Seed Project	Dr. Pankaj Kumar, Asstt. Prof., VAHEE	D.P.R., Hyderabad	41.0
2.	AICRP for Epidemiological Studies on Foot and Mouth Disease”	Dr. Manoj Kumar, Asstt. Prof., Veterinary Microbiology	I.C.A.R., New Delhi	1.5
3.	AICRP for Animal Disease Monitoring and Surveillance	Dr. Pankaj Kumar, Asstt. Prof., Veterinary Microbiology	I.C.A.R., New Delhi	1.0

4.	Outreach Programme on Monitoring of Drug Residues & Environmental Pollutants.	Dr. Nirbhay Kumar, Asstt. Prof., Veterinary Pharmacology & Toxicology	I.C.A.R., New Delhi	7.0
5.	National Network for Fisheries and Animal Anti-microbial Resistance (INFAAR)	Dr P. Kaushik, Head, Asstt Prof. VPH	ICAR, New Delhi	N.A
D. Extension Related Projects				
1.	Krishi Mantrana: An AI - based Multimodal Dialog - System for Farmers	Dr. Pankaj Kumar, Asstt. Prof., VAHE	CDAC, Kolkata	11.67
2.	Improving rural livelihood security of tribal and resource constrained farmers of North Bihar through low cost technology of animal husbandry and horticulture	Dr. Pankaj Kumar, Asstt. Prof., VAHE	I.C.A.R., NASF, New Delhi	30.0

B. University Funded Research Projects

S. No.	Title of the of the Project	Principal Investigator	Duration	Amount (Rs. In lacs)
1.	Studies on urohydropropulsion and tubecystostomy for surgical management of urolithiasis in goats.	Dr. Ramesh Tiwary, Asstt Prof., Surgery & Radiology	02 Years	1.00
2.	Radiographic and sonographic screening of cardiac, hepatic and urinogenital diseases of canines.	Dr. Pallav Shekhar, Asstt Prof., Vety. Medicine	01 Year	0.50
3.	Bio-fabrication of gold nano particles and its anti-proliferative effect in cell line.	Dr. Ajeet Kumar, Asstt Prof. Vety Biochemistry	03 Years	7.00
4.	Comparison and development of standard protocol of oestrous synchronization in anoestrous buffaloes.	Dr. Ankesh Kumar, Asstt Prof. TVCC	02 Years	0.75
5.	Formulation and evaluation of area specific mineral mixture on the performance of dairy cattle and buffaloes.	Dr. Pankaj Kumar Singh, Asstt Prof., Animal Nutrition	02 Years	3.00
6.	Assessment of <i>Moringa oleifera</i> as a fodder	Dr. Ravi Ranjan Kumar Sinha, Asstt Prof. LPM	02 Years	3.60

7.	Isolation and characterization of bacteriophages targeting food borne pathogens from sewage samples of livestock farm	Dr. Anjay, Asstt. Prof., VPHE	03 years	8.00
8.	Adoption of quail farming in different systems and assessment of its productivity performance under deep litter and cage system of housing	Dr. Pankaj Kumar, Asstt. Prof., VAHE	02 years	4.48
9.	Evaluation of proliferative and apoptotic markers in canine mammary tumour for diagnosis and prognosis	Dr. Kaushal Kumar, Asstt. Prof., Pathology	02 years	9.38
10.	Colorimetric detection of E. coli, Streptococcus spp. and Staphylococcus aureus isolated from mastitis milk samples by optical biosensing using oligonucleotide gold nanoparticles	Dr. Ajeet Kumar, Asstt. Prof., Biochemistry	03 years	12.50
11.	Metagenomic analysis of chicken gut microflora and its modulation by supplementation of tannins and virginiamycin	Dr. Kaushalendra Kumar, Asstt. Prof. Animal Nutrition,	02 years	15.62
12.	Inventorization and documentation of aquatic	Dr. V. P. Saini (PI)	03 years	17.72

Institution-funded research projects

University funded research project entitled “Process standardization and optimization for shelf life enhancement of Paneer from milk of Bihar origin” was extended for the year 2019-20 for optimization of thermal process (sterilization process) for enhancement of shelf life of paneer for increasing its acceptability and profit from this. Department has not only standardized the technology for manufacture of khoa based ramdana lai, but also completed the assessment of khoa based ramdana lai samples collected from various locations in Bihar and enhanced the shelf life of khoa based ramdana lai by using vacuum packaging, with various packaging materials.



Students working in laboratories

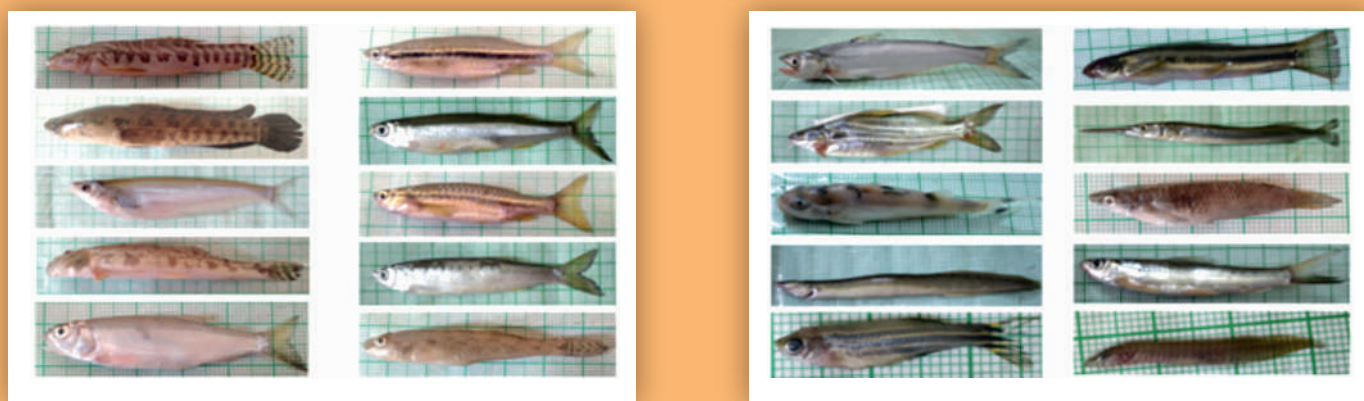
Strengthening of Research Laboratories in BVC, Patna

During 2019-20, few newer equipment were purchased and installed in different laboratories of Bihar Veterinary College which included “Semi-Automatic Nitrogen Analyzer in Department of Animal Nutrition, Paneer processing unit in Department of LPT, Rota Rod and Cook's Pole Climbing Apparatus in Experimental Pharmacology laboratory, and Biosafety Cabinet and Autoclave in Department of Pharmacology & Toxicology, PCR machines in Departments of Medicine and Microbiology and some minor equipment in Disease Diagnostic laboratory in Veterinary Clinical Complex.

Strengthening of research laboratories in College of Fisheries, Kishanganj

Three Research Laboratories in the Departments of Aquaculture, Fisheries Resource Management, and Soil and Water Chemistry were developed for conducting practical classes of Undergraduate courses with essential and modern scientific equipment like, Gel Documentation System, Thermal Cycler, Water Purification System, Refrigerated Centrifuge, Bio-safety Cabinet, Ice flaking machine, Stereo-zoom Microscope etc.

Under institutionally funded research project, Inventorization of fish fauna of Mahananda River was done based on the seven sampling stations covering upstream and downstream stretches. A total of 312 fish specimens were collected which represented 34 different fish species (tentative).



Different fish collected from the river Mahananda

Regional Research Stations and Training Centres

Sipaya Buffalo Farm, Gopalganj: During the year under report, University has been transferred 80.80 acres land at Sipaya (Gopalganj) by Department of Animal & Fisheries Resources, Govt. of Bihar to develop the Regional Research Centre with disease diagnostic and training facilities and for establishing modern buffalo breeding center. Detailed project proposal for development of this Regional Research–cum-Training Centre has been submitted for approval to Bihar Government.

Tekna Goat Farm, Gaya: Government Cattle Farm Tekna, Gaya having an area of 22 acres is in the process of transfer from Department of Animal Husbandry to BASU to develop it as Regional Research Centre for modern goat farming and training centre along with diagnostic and training facilities.

Central Poultry Farm, Patna: Bihar Government is in the process of transferring Central Poultry Farm, Patna to this University with the objective of developing it as “Poultry Research and Training Centre” to give impetus to poultry farming, especially “backyard poultry farming in the state.

EXTENSION

Directorate of Extension Education of the University acts as an interface for transferring technologies, disseminating information and instilling skills among various stakeholders by making concerted efforts with the help of University faculty and officials of the line departments.

Directorate of Extension Education organized number of training programmes and started 'Kisan Samvaad Portal' for offering online 'Farm Advisory Services' to different livestock holders. During the lockdown period of COVID-19 pandemic, Directorate was devoted to carry out various extension activities by swiftly switching over to online/virtual mode with innovative extension education programmes and interventions.

Started 'Kisan Samvaad' portal/Advisory services through University website for educating farmers to usher science-led development in livestock sector in the state. Through this portal, farmers have the consultancy outreach for about their issues related to animal production, animal health, fisheries and agriculture related problems. Farmers also have easy access to various schemes of Govt. of Bihar and literature in Hindi about various scientific practices etc.

A. Extension Activities undertaken by BVC, Patna

I. Training Programmes

Department of Extension Education provided training to farmers, field level officers and other stakeholders as per the details given below:

Course/Title and Duration	Duration	No. of Trainees	Type of Trainee
Advanced Goat Farming	18.09.19 to 21.09.19	42	Progressive Farmers
Commercial Animal Husbandry	24.09.19 to 26.09.19	35	
Advanced Animal Husbandry	06.11.19 to 09.11.19	36	
Commercial Animal Husbandry	11.11.19 to 13.11.19	33	
Advanced Animal Husbandry	14.11.19 to 16.11.19	35	
Advanced Goat Farming	18.11.19 to 21.11.19	30	Progressive Farmers
Management of Animals in Emergency	09.12.19 to 12.12.19	23	Veterinary Officers of Animal Husbandry Department, Bihar
Advanced Goat Farming	27.01.20 to 30.01.20	33	Progressive Farmers
Animal Husbandry Practices	03.02.20 to 06.02.20	31	
Commercial Animal Husbandry	15.02.20 to 18.02.20	36	

During COVID-19 lock-down period, special training programmes were also organized for the migrant workers returning to state for skill and entrepreneurship development in goat farming, poultry, dairying, fisheries and integrated farming system (IFS). The bankers were also involved in training programmes for hand-holding and providing financial support. During lockdown period, University also organized 'Refresher Course' on "Recent Advances in Veterinary Medicine & Surgery" (26-30 June, 2020) in E-learning mode for Veterinary Officers of the state in collaboration with Department of Animal and Fisheries Resources, Govt. of Bihar and BAMETI, Patna.



E-learning programme for AHD officers organized by BASU

In addition, “Bihar Fish Entrepreneurship Incubation Programme” was organized in virtual mode in collaboration with Bihar Vidyapith, Patna. A webinar on “scope of ornamental fish enterprise in Bihar” was also organized for promoting entrepreneurship in ornamental fisheries sector in the state on 10/08/2020.

II. Extension Activities in Adopted Villages

Directorate of Extension Education, BASU, Patna undertook extension activities in adopted villages, named as 'Poultry Gram' and 'Goat Gram' and the activities included training and awareness, and health and hygiene aspects for promotion of poultry and goat husbandry as means of sustainable sources of livelihood through scientific knowledge and managerial practices. For improved poultry farming, the poultry chicks of 'Vanjara' and “Gram Priya” strains were distributed among the resource-poor farming community for promoting “Backyard Poultry” in the state.

'Vanjara' and quail chicks were also distributed among 200 farm-families belonging to 'Tharu Tribes' at Ram Nagar in west Champaran. Apart from regular monitoring, University also provided other inputs like medicines, feed, feeder, drinker, regular vaccination & health care services. University is also working for evolving market linkages and value addition of their produce.

III. Other activities

- (I) **Virtual meeting of the dairy farmers:** A virtual meeting of dairy farmers of the state was organized on the occasion of “World Milk Day” (i.e. 1st June, 2020) in order to ascertain the problems faced by dairy farmers especially during the lockdown period.
- II) **On-line training for poultry farmers:** It was organized by the scientists of University KVK, Jamui during the lockdown period on June 2020 in which 97 farmers participated.
- III) **On-line meeting of fish-farmers:** It was organized by College of Fisheries Kishanganj on the occasion of “World Fisheries Day” (10th July, 2020) with an objective to sort out the problems faced by the fisheries farmers of the state in which more than 200 farmers participated.
- IV) **One-day workshop-cum-training programme on management of 'Wetland Fisheries:** It was organized by University in collaboration with ICAR-CIFRI Barrackpore on November 20, 2019 in which 110 fish farmers participated.
- (V) **On-line training Programmes for the livestock farmers and field veterinary officers of the state:** Twenty-six training programmes were organized during the year under report. In addition Department of Extension Education also organized 14 training programmes for livestock farmers and field veterinary officers of the state on various topics in collaboration with the Department of Animal & Fisheries Resources, Govt. of Bihar and ATMA of different districts in the state.



Hon'ble Vice Chancellor distributing the certificates to participants during Training programme for the Veterinary Officers of AHD, Govt. of Bihar on Management of Animals in Emergencies

VI) Animal Health Camps: During the year under report, 11 different animal health camps were organized in different parts of the state in which more than 2500 clinical cases were handled by the teachers and scientists of BVC Patna. Details of the camps organized is given below:



A glimpse of the animal health camp organized at Sampatchak.

Animal Health Camps and Other Services in Villages

Sl. No.	Date	Animal Health Camp etc.	No. of farmers benefited
1.	09.08.2019	Flood relief camp at, Hanuman Nagar, Darbhanga	332
2.	25-27 Sep. 2019	National Poultry Expo, Gyan Bhawan, Gandhi Maidan, Patna	739
3.	03.10.2019	Flood relief camp at Pahleja Ghat, Saran	190
4.	04.10.2019	Flood relief camp at Danapur, Patna	240
5.	22.11.2019	Animal Health Camp cum Chick distribution programme, Mehshi, East Champaran	105
6.	25.11.2019	Animal Health Camp, Ujhilpur, East Champaran with ICAR-NRCL, Muzaffarpur	175
7.	16.12.2019	Animal Health Camp, Sampatchak, Patna	145
8.	10.01.2020	Equine Health Camp, Rajgir, Nalanda	80
9.	20.02.2020	Animal Health Camp, Esarhi, Bhojpur	148
10.	23-25 Feb, 2020	Kisan Mela-2020 at BAU, Sabour	442

VII) Trainings for framers and livestock owners: Under ICAR-NASF Project entitled “Improving rural livelihood security of tribal and resource constrained farmers of North Bihar through low cost technology of Animal Husbandry and Allied Sector”, trainings for 525 farmers were organized to increase capacity building of farmers in the selected areas. Trainings were based on the available resources in selected villages and with support of low cost technology for poultry farming, goat farming, and sheep farming etc. Vanraja poultry chicks along with feeder, drinker and pre-starter feed were distributed to selected farmers of W. Champaran, E. Champaran and Muzaffarpur districts.

One of the farmer from E. Champaran district who started his back-yard unit with the inputs given by BASU, Patna has increased his unit size by adding 500 additional birds and motivated other farmers too.



Training of Farmers at Muzaffarpur under NASF.



Input distribution to farmers of Muzaffarpur district under NASF.

(VIII) Participation in Kisan Mela

Bihar Animal Sciences University, Patna participated in Regional Farmers Fair-2020 held from 23rd to 25th of February, 2020 at Bihar Agricultural University, Sabour, Bhagalpur. Total 804 farmers were benefited in the form of advice, literature, treatment etc. Bihar Animal Sciences University stall was awarded the first prize in stall arrangement under institutions category.



BASU Patna Stall awarded the First prize in Institution category during Kisan Mela at BAU, Sabour

IX) Organization of Dog and cat show: Bihar Veterinary College organized cat and dog shows on March 7 and 8, respectively in the University premises. In these shows, 36 cats and 90 dogs of different breeds participated.



Cat and Dog shows organized respectively on March 7 and 8, 2020 in BVC premises

IV. On-going Extension Projects

I. Krishi- Mantrana:

The project “Krishi- Mantrana” is an AI based multimodal dialog-system for farmers, it is sponsored by R&D IT Ministry of Electronics and Information Technology, Govt. of India with the partnership of CDAC Noida, CDAC Kolkata, and BASU. This project is to develop multimodal question answer system for farmers using artificial intelligence in Hindi with different tone and dialect. The data like 3600 Q-A pairs were collected from January 2020 to June 2020 and sent to CDAC, Noida and CDAC Kolkata to upload app on the server “Meri Bhasha Meri Wani”. The work on this app is under process with system validation and testing the collected data. The app would be beneficial for farmers to get expert opinion on livestock based problems at any time.



Voice recording at Chakiya village of E. Champaran.



Voice recording and problems oriented date collection at Chakhelal, Muzaffarpur.

II. Poultry Seed project:

Poultry seed project is sponsored by ICAR-DPR Hyderabad. The main objective of this project is maintenance of parent germ plasm received from ICAR-DPR Hyderabad, Production of commercial chicks, distribution of chicks and adoption of backyard and commercial poultry farming by youth and farmers.

Total Vanraja chicks supplied during the current year was - 28,415 and Gramapriya was - 308. The hatchability on fertile egg set basis was 86.79 percent for Vanraja -XI and 90.90 percent for Vanraja-XII and for Gramapriya, it was 79.51 percent.

Chicks were distributed to almost all the districts of Bihar. Some farmers of Jharkhand and Uttar Pradesh also got chicks from BASU, Patna. This project has played a pivotal role in strengthening backyard poultry system in Bihar.



PSP birds at Jamui under backyard poultry farming system



Monitoring of PSP birds at Kaduatari village

B. Extension Activities undertaken by Krishi Vigyan Kendra, Jamui

During the year under report, KVK Jamui of the University undertook large number of extension activities including organization of training programmes for farmers, rural youth, extension functionaries and Agriculture Skill Council of India.

I. Trainings organized

S.N.	Thrust Area	No. of Training Programmes	No. of Participants
A. Trainings for Farmers			
1	Crop Production Resource Conservation Technologies, Integrated Crop Management, Water management, Cropping Systems, Crop Diversification, Integrated Farming, Weed Management, Seed production, Nursery management, Fodder production.	25	594
2	Horticulture Enterprise development, Rejuvenation of old mango orchard, Fruit cultivation, Value addition & production technology of crops and spices etc.	14	351
3	Soil Science Soil fertility management , Soil and water conservation, Integrated nutrient management, production and use of organic inputs, management of problematic soils, Micro nutrient deficiency in crops, Nutrient use efficiency, Soil and water testing.	15	394
B. Training for Rural Youth			
	Planting material production, Mushroom Cultivation, use of water and Value addition	6	150
C. Training for Extension Functionaries			
	Productivity enhancement in field crops	2	45
D. Agriculture Skill Council of India			
	Seed Production & Bee Keeping	2	40
	Total	64	1574

II. On Farm Trials:

OFT-1

Title	Screening of different cultivators combination (<i>Low water required</i>) for protecting production of R -W system.
Problem	Productivity loss in changing rainfall pattern.
Technology options	Tech. option 1 - Farmers practice (Long duration R -W i.e. MTU 7029 Løk 1) Tech option 2 - Rajendra Sweta - Sabour Samridhi Tech option 3 - Swarn Shreya HD 2967
Finding	Statistical analysis of the data revealed that the technology option 3 as Swarn Shreya HD 2967 recorded maximum equivalent yield followed by option 2 having Rajendra Sweta-Sabour Samridhi in case of yield as well as BC ratio.
Final Recommendation for Micro level Situation	In the changing rainfall scenario, farmers need to opt short duration drought tolerant rice variety “Swarn-Shreya fb” and HD 2967, the improved variety of wheat.

OFT-2

Title	Assessment of different pre-emergence weedicide for controlling weeds in onion.
Problem	Low yield of onion due to severe weed infestation.
Technology options	Farmers Practice: Manual weeding. Technology Option 1 : Pendimethaline @ 1.0 l/ha + 1 manual weeding 30 DAS Technology Option 2 : Oxyflurofen @ 0.5 l/ha + 1 manual weeding 30 DAS
Finding	Statistical analysis of the data revealed that the technology option 2 as Oxyflurfen @ 0.5 l/ha + 1 manual weeding 30 DAS recorded maximum yield of 230 q/ha followed by technology option 1 as Pendimethaline @ 1.0 l/ha + 1 manual weeding 30 DAS by 200 q/ha/BC ratio was recorded as 3.44 to 2.87 as the T 2 to T 1.
Final Recommendation for Micro level Situation	Application of Oxyfluorfen @ 0.5 l/ha + 1 manual weeding 30 DAS is best suited technology to control weeds in onion for higher yield.

OFT-3

Title	Assessment of different levels of boron on yield of wheat crop.
Problem	Poor grain setting in wheat due to low boron status in soil..
Technology options	Farmers practice. No boron application. Tech option 1. Boron 2 kg ha ⁻¹ (soil application) Tech option 2. Boron 0.5% (foliar spray at booting stage)
Finding	Statistical analysis of the data revealed that Tech. Opt. 1 Boron 2 kg ha (soil application) recorded maximum grain yield i.e. 40.73 q/ha. which was 15.1 percent higher over farmers practice with B:C ratio 2.10:1.
Final Recommendation for Micro level Situation	Soil application of Boron @2 kg ha ⁻¹ can minimize the issue of poor grain setting in wheat.

III. Frontline Demonstration:

- FLD of Drought -tolerant improved rice variety as “Swarn-Shreya” with 42 farmer's fields.
- FLD on improved variety of Bamboo var. *Bamboosa balacoea* with 50 farmers.
- FLD on kitchen gardening with 20 farmers.

IV Special Programmes:

- Cluster Frontline Demonstration on pulses - Pigeon Pea, Lentil and Chik-pea was conducted by 182 farmers.
- Training on Tailoring & Stitching was conducted with 40 farm women under SCSP.
- CIMMYT sponsored CSISA project was sanctioned to KVK Jamui.

V. Other Activities:

Nature of Extension Activity	No.	Farmers				Extension Officials			Total		
		M	F	Total	SC/ ST (% of total)	M	F	Total	M	F	Total
Field Days	2	64	52	116	30	9	0	9	73	52	123
Kisan Mela	2	384	30	414		32	0	32	416	30	436
Kisan Ghosthi	5	315	107	422		13	2	15	328	109	437
Kisan Chaupal	2	54	45	99		5	0	5	59	45	104
Method Demos	2	40	8	48		7	3	10	47	11	58
Workshop	1	94	147	241		10	0	10	104	147	251
Exposure visits	03	72	39	111		0	0	0	72	39	111

Nature of Extension Activity	No.	Farmers				Extension Officials			Total		
		M	F	Total	SC/ ST (% of total)	M	F	Total	M	F	Total
Plantation Programme	6	124	105	229	30	0	0	0	124	105	229
NADCP- Workshop	1	40	149	189		38	0	38	78	149	227
Vigilance Awareness Week	4	152	2	154		0	0	0	152	2	154
International Yoga Diwas	1	62	2	64		5	1	6	67	3	70
Swatchta Hi Sewa	13	301	234	535		0	0	0	133	125	258
Farmer's Producers Organisation	1	20	2	22		5	0	5	25	2	27
Farmers Scientist Interaction	4	161	95	256		14	3	17	175	98	273
Total	47	1883	1017	2900		138	9	147	1853	917	2758





5

University Library

Bihar Animal Sciences University has the University Library and also college libraries with modern facilities and updated material so as to provide latest printed and digital information on Veterinary Sciences and related disciplines. University library changed itself from a traditional library to a modern library by adopting ICT for library automation.

A. University Library Resources:

- i) Books: University Library has a total collection of 22,000 books.
- ii) Journals Subscription: University Library subscribed 20 national journals.
- iii) Print Volumes of bound journals: University Library has a total of 1500 bound periodicals in its collection.
- iv) Thesis & Dissertation: There are 700 plus theses in the University Library.
- v) Newspapers & Magazines: Library subscribed the below listed English and Hindi newspapers and magazines.

News Papers	Magazines
The Hindu	Reader Digest
The Times of India	Competition Success Review
Hindustan Times	Frontline
Hindustan (Hindi)	India Today
Dainik Jagran (Hindi)	Out Look
Danik Bhaskar (Hindi)	Science Reporter
Employment News (Hindi)	Pratiyogita Darpan
	Sarita (Hindi)
	Vigyan Pragati (Hindi)
	Sports Star
	Yojana



Inauguration of the newly constructed library building and plantation of sapling by Hon'ble Minister Dr. Prem Kumar

A. Different Sections in the Library:

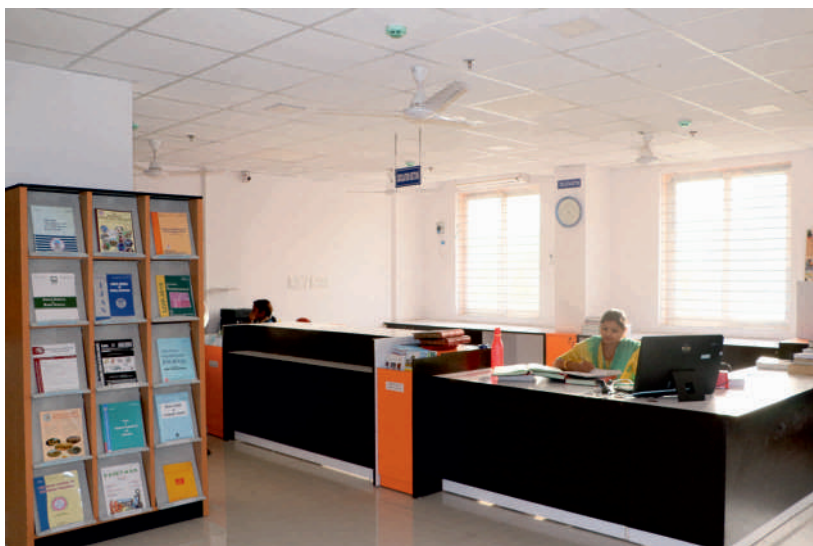
University Library has the following sections:

Ground Floor: It has Newspaper Section, Magazine Section, Reading Hall and one Conference/Meeting Hall.



Conference/Meeting hall at library building

First Floor: It has Circulation Counter-I, Librarian's Office, Reference and text books section, New arrivals, Reading Hall No. 02 and Digital Resource Center



Circulation Counter & Library Kiosk

Second Floor: It has Circulation counter-II, Books Section, SC/ST Collection (Reserve collection), Book Bank Collection and Reading Hall No.-03.

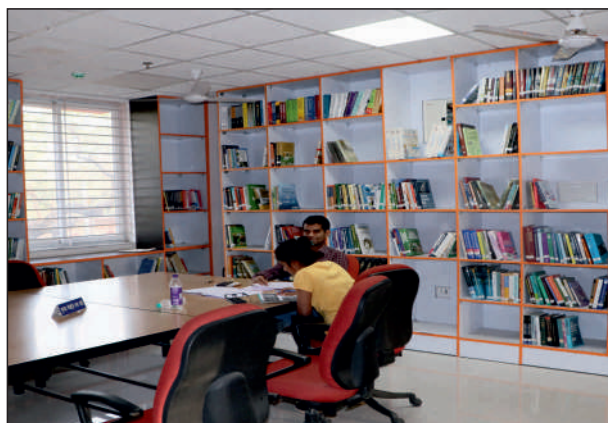
Third Floor: Third floor houses Photo-copy Section, Theses/Dissertation Section, Bound Journals Section and Reading Hall No.-04.

C) Available facilities

i) CeRA (Consortium for e-Resources in Agriculture): CeRA covers the journals of Springer Verlag, Annual Reviews, CSIRO Australia and J-gate publishers on Agriculture, Dairy, Veterinary Sciences, Fisheries, Crop Sciences, Socio- economic, Computer Sciences and provides information of more than 3800 journals through cost-effective manner, Institutes/ SAUs including BASU Library.



Digital Resource Centre



Book Section

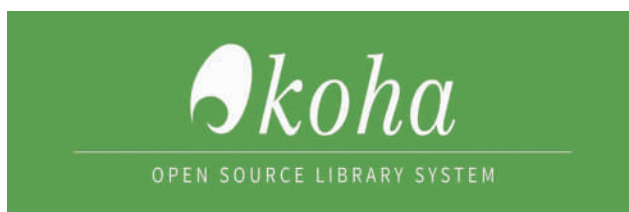


Students Reading at University Library

ii) **Krishi-kosh:** Krishi-kosh is an Institutional Repository under NARS. This repository is having collection of old and valuable books, records and various documents spread all over the country in different libraries of Research Institutions and State Agricultural Universities (SAUs) including Bihar Animal Sciences university, Patna . BASU library also digitized and made available their old/rare collection on Krishikosh.

D) Library Automation: Since automation is emerging as boon for present day libraries, BASU library changed itself from a traditional library to a modern library by adopting ICT for library's automation. University Library is using the below said modules for housekeeping activities of the Library, using Library Automation. Library is also using barcode for its books.

University Library has implemented KOHA Library automation Software. All the housekeeping activities of library are being undertaken using KOHA. The key features of Koha, which include the following: A full-featured modern ILS, award-winning OSS with no licensing fee, compatible with multiple computer formats, web-based and integrative, copy cataloging, MARC support, tailored cataloging for special libraries, document management, managing online and offline resources, RSS feeds of new acquisitions, emailing and texting notices, printing barcodes, serial management, stock management, web-based OPAC, simple search interface, simple or comprehensive acquisitions, and multi-tasking. Staff has been given training on use of KOHA by M/S Jivesna Tech Pvt. Ltd, Ghaziabad (U.P) from time to time.



E) User Services: BASU Library is providing general as well as ICT-based services to its users, including the following-

- Current Awareness Services
- Provision of Web access to OPACs
- Online instructions or information of content of Books through whatsapp app;
- Online reader's advisory services through whatsapp app.
- Book issue/return, renew information through email.

a) Circulation services (Issue/Returns): Circulation services at the Service Desk provide the lending of library materials during the library operation hours. Service desk staff and library professional staff help the users to locate books and other materials in the library including membership card to all its users and then issue and return Books/Documents.

b) Reference Service: Library houses important reference resources like Encyclopedias, Dictionaries, and Handbooks, Manuals, Statistics Year books etc. The collection ranges from general to subject specific resources. All the reference resources are housed in the Reference section. Users contact the staff on duty for any assistance.

c) **Reprographic services:** Photocopy facilities is also provided to library users on nominal charges basis in the Reading Hall.

F) Conference/Training Organized:

- Webinar on Indian Citation Index: Indian Citation Index (ICI) provides researchers, scientists, administrators, faculty, student, librarians and publishers quick and powerful access to multidisciplinary and citation data/information they need.
- Sensitization Workshop-cum-Webinar on Agriculture Knowledge Management in the Networked Digital Environment: Digital knowledge is the current buzz word. Digital services and information access technologies continue to create new opportunities, new challenges and new expectations. Taking note of the fast pace of innovations happening in the field of digital knowledge management, it is necessary to establish a collaborative management structure to coordinate and guide the implementation and ongoing maintenance of the digital libraries; to set policy regarding participation, funding, development and access; to encourage and facilitate broad involvement; and to address issues of policy and practice that may inhibit full citizen access. Therefore, National Knowledge Management Centre for Agricultural Education and Research (NKMC4AER) is proposed to innovate and execute newer developments for efficient use of modern platforms of digital knowledge. The NKMC4AER will continue to strengthen the digital use of modern platform of NARES repositories under various agricultural libraries of the Universities.

Library Timings:

Weekdays: Monday- Saturday	9:00 A.M – 8:00 P.M
Lunch Break	1:00 P.M - 1:30 P.M
Sunday& Holiday's	10.00 AM – 5.00 PM

6

Events and Co-Curricular Activities

All-round development of students along with academics is of paramount importance in Bihar Animal Sciences University. University. Directorate of Students Welfare is actively engaged in promoting cultural, literary, fine arts and sports activities and ensuring soft skills and other intrinsic qualities of students. Education policy of BASU embraces the concept of holistic development of students and undertakes activities which are essential for their all-round personality development. Different sections have been created at College and University levels to facilitate, impart and monitor activities pertaining to sports, cultural and literary, NSS, NCC, career counselling etc.

Cultural & Literary Society

Good number of faculty members and students of the University are bestowed with exceptionally good and commendable artistic, cultural and literary talents. To nurture and promote these talents, BASU has Cultural and Literary Society which is run by faculty and students under the Chief Patronage of Hon'ble Vice-Chancellor. Director Student's Welfare is the Patron and the Officer-in-charge Cultural & Literary Society is the Chairman. This Society undertook various programmes during the year to inculcate leadership qualities, human values, positive thinking and creativity and develop soft skills in students. Due to COVID-19 menace from March 2020, innovative approaches were employed by students and faculty and the society organized several on-line cultural and literary events, career counselling, motivational talks, and lectures on stress management etc. Some of the important activities undertaken and programmes organized by the University were:

71st Republic Day: It was celebrated on 26th Jan. 2020. Hon'ble Vice Chancellor, Dr Rameshwar Singh, unfurled the National Flag and inspected the “Guard of Honour” presented by NCC cadets. All the senior officers of the University, faculty members and students were present on the occasion.



A glimpse of 71st Republic Day Celebrations in BASU

Independence Day: 73rd Independence Day of India was celebrated on 15th August, 2019 with great fervor and enthusiasm. Hon'ble Vice-Chancellor hoisted the national flag and delivered 'Independence Day Speech' covering the achievements and future plans of the University. After march-past, to mark the occasion, cultural program was organized by Cultural Society involving faculty and students. All senior officers, faculty members and staff of the University overwhelmingly participated in the programme.

2nd Foundation Day of BASU: Bihar Animal Sciences University celebrated its 2nd Foundation Day on 29th August 2019. Foundation Day lecture was delivered by Dr. Harsh Kumar Bhanwala, Chairman, NABARD, New Delhi. In the evening, a grand cultural programme was organized by Cultural & Literary Society in which students and faculty of BASU made mesmerizing performances including spectacular dances, songs and mime. The program received great applaud and ovation from the audience. Apart from the senior officers, faculty and staff along with their families also attended the programme.



Hon'ble Vice Chancellor, BASU inaugurating the “Cultural Evening on 2nd Foundation Day” 2019 and students of BASU presenting their dance

Swami Vivekanand Jayanti: Cultural & Literary Society and National Service Scheme unit of the University jointly organized Swami Vivekanand Jayanthi in the Conference Hall of Bihar Veterinary College on 13th January 2020 to inculcate values and create awareness amongst youth about their role towards nation building. Dr Rameshwar Singh, Hon'ble Vice Chancellor, BASU graced the occasion as Chief Guest and advised the students to follow the path shown by the great saint, Swami Vivekanand. Dr R K Trivedi, DSW, spoke on relevance of thoughts and preaching's of Swami ji for today's youth. Dr J K Prasad, Dean, BVC also expressed his views on this occasion. The program was attended by the Senior Officers, students and staff of the University. Dr R K Trivedi, DSW, BASU offered the vote of thanks.



Dean, BVC, Director Extension Education, BASU and Dr. K. C. Bajpai, Professor, BIT, Patna inaugurating “National Youth Day, 2020”

150th Birth Anniversary of Mahatma Gandhi: University commemorated 150th birth anniversary of Mahatma Gandhi and the day started with performing yoga in which Hon'ble Vice Chancellor, Dr Rameshwar Singh, other senior officers, faculty, staff and students participated. Floral tributes were paid to “Father of the Nation” and a rally was organized to clean the campus. Beside this, a cultural evening was also organized to pay homage to Mahatma Gandhi. The students of Bihar Veterinary College and Sanjay Gandhi Institute of Dairy Technology performed dances and songs in the programme.

Cultural & Literary Society of BASU also organized a 'debate competition' on 2nd October, 2019 to mark the 150th Birth celebration of Mahatma Gandhi. 12 students from Bihar Veterinary College and Sanjay Gandhi Institute of Dairy Technology, Patna participated in different events. The topic for the debate competition was “Is Philosophy of Mahatma Gandhi Still Relevant in Present Days”.



Hon'ble Vice-chancellor, BASU, Patna offering flowers on Mahatma Gandhi's photo on “150th Birth Anniversary of Mahatma Gandhi” and student participating in Debate Competition on “150th Birth Anniversary Day of Mahatma Gandhi”

Students performance on “150th Birth Anniversary of Mahatma Gandhi”



First Inter-College Cultural & Literary Competition: First Inter-College Cultural & Literary Competition of Bihar Animal Sciences University was organized on 12-13 November 2019. The cultural, literary and art completions were held at three different locations within the campus of University. A panel of independent judges from Patna University, BIT Patna and Prasar Bharti (Radio & Doordarshan) were constituted to evaluate the best performances. Dr Rameshwar Singh, Vice Chancellor, BASU, Dr N K Jha, Director Student Welfare, Patna University and Dr KC Bajpai, Professor & Head, Creative Arts, BIT Patna, Dr R K Trivedi, DSW, BASU along with other senior officers, faculty, staff and teachers were present during the prize distribution ceremony programme. All together, 75 students of Bihar Veterinary College, Patna, Sanjay Gandhi Institute of Dairy Technology, Patna, and College of Fisheries, Kishanganj participated in the competition and made spectacular performance one after another.



Hon'ble Vice Chancellor, BASU and Chief Guest Dr. K.C. Bajpai, Professor, BIT, Patna inaugurating the 1st Inter College Cultural & Literary Competition – 2019 and a student making Rangoli



Students presenting skit and mime during 1st Inter-College Cultural & Literary Competition



Students performing dance during the 1st Inter-College Cultural & Literary Competition

Students of College of Fisheries during different events of the First Inter-College Culture & Literary Competitions along with other students of BASU also performed very well in different events and got prizes in several categories like group song, group dance, skit, solo song, stand-up etc. in the inter-college culture and literary competition.



Winners of 1st Inter-College Cultural & Literary Competition

Hon'ble Vice Chancellor, BASU, the Chief Guest and Officers, felicitating the winners of 1st Inter College Cultural & Literary Competition, 2019.



National Science Day: A debate completion was organized on the eve of National Science Day in Conference Hall of BVC, Patna. All together 17 students of Bihar Veterinary College, Patna and Sanjay Gandhi Institute of Dairy Technology, Patna participated in the competition. Ms. Akansha Anand (BVC 2015 batch) and Ms. Aditishree (SGIDT 2017 batch) were the winners in English and Hindi, respectively. The programme was coordinated by Dr. Dushyant Yadav, Assistant Professor, BVC, Patna.



Dean, BVC, Patna inaugurating “National Science Day-2020” and students of BASU participating in debate competition

Participation in AGRI-UNIFEST 2020: Agri-unifest is the mega ICAR sponsored cultural gala to nurture and nourish the soft skills and explore and develop creative potentials in students enrolled in different SAUs. This year, it was organized at Indira Gandhi Krishi Vishwavidyalaya, Raipur during 8-12 February, 2020. A team comprising of 25 students and two faculty members were sent to take part in various cultural and literary events like folk group dance, theatre arts (one act play, skit, mime, mono acting), fine arts (collage, poster making, rangoli), and literary events (quiz, elocution, debate, extempore etc. Despite being the newly established University with very few students on-roll, performance of BASU team received applause and appreciation.



Team BASU in AGRI-UNIFEST, 2020 at IGKV, Raipur, Chhattisgarh

Cultural & Literary Initiatives during COVID – 19 Pandemic

BASU very aptly and effectively addressed the challenges due to COVID-19. All-important activities and events were swiftly switched on from off-line to on-line mode with the help of various technological options. Cultural & Literary Society of BASU took several initiatives to showcase the talent of students and faculties which included series of lectures and speeches to motivate, strengthen and improve the mental status of students and teachers. Some of the important events organized during COVID-19 lock-down period were:

World Environment Day Speech: Cultural & Literary Society and NSS unit of BASU organized the World Environment Day on 5th June 2020 to create awareness among the students, faculty and common citizens about the consequences of various environmental issues. An online World Environment Day Speech was organized to venerate the mother earth and its environment. A webinar was organized in which Dr. K. Venkatraman, Former Director, Zoological Survey of India and presently consultant at National Centre for Sustainable Coastal Management, Chennai was invited to deliver an online speech. He emphasized on the need to conserve the biodiversity and save the environment from further degradation. Dr Rameshwar Singh, Vice-Chancellor, BASU presided over the session and advised youth and faculty to work for protection of environment. Dr R K Trivedi, DSW, BASU presented the vote of thanks. All senior officers, faculty and students of BASU participated in the webinar. The event was also webcasted and live-streamed through the university Facebook and YouTube channel.



**Hon'ble Vice-Chancellor and Officers, BASU, Patna planting a sapling on
“World Environment Day -2020”**

On this occasion, a quiz competition on world environment was also organized in which 45 students of BVC, Patna, SGIDT, Patna and COF, Kishanganj participated, and 20 participated in “*Ped Lagao Selfie Bhejo competition*”. The programme was coordinated with the help of Zoom Meet by Dr Dushyant Yadav, Assistant Professor, BVC.

Talk on Stress Management: For management of stress and depression in human beings due to lockdown and Covid-19 pandemic, a talk on 'Stress Management' was organized on 20th of June 2020 in which Dr. Madhulika Bajpai, a stress management expert, Associate Professor (Psychology), Delhi University, delivered an interactive speech on various dimensions of stress in human life, reasons for such stress and the coping methods to mitigate them. In her kaleidoscopic and convincing speech, she nicely portrayed the causes and consequences of stress and suggested the methods, which can help in deposing agony, stress and depression among students and staff. The session was presided over by the Hon'ble Vice Chancellor and all the senior officers, faculty, students and other staff attended the webinar. DSW, BASU offered the vote of thanks.

Talk on Public Speaking: Public speaking is an art and requires skill to address and express one's views aptly before the public. In an endeavour to improve the soft skills and personality of students, BASU organized an online talk on public speaking on 27th June 2020. Dr. Birendra Kumar, Former Dean (PGS), BAU, Sabour and Professor, GBPUAT, Pantnagar was invited to deliver the talk. In his mesmerizing speech, Dr Kumar unfolded the intricacies of public speaking and virtually galvanized the minds of listeners. With real life examples, he beautifully depicted that how an effective communication can catch the attention of people and makes a difference in their lives.

Online Gala Evening (Singing)

As a unique initiative, Cultural & Literary Society, BASU arranged two-day's gala online cultural evening on 19th & 20th June 2020 in which songs were sung by students of BASU. Dr R.K Sharma, Assistant Professor, BVC coordinated the programme whereas Ms. Shakshi, a final year UG Student of BVC did the compeering. Ten selected students from the three constituent Colleges made the evening nostalgic.

Dr Kasturi Chakrabarti from CIFE, Mumbai was the special invitee who sung a patriotic song in memory of the martyrs of Galwan. The programme was arranged on Zoom Meet, which was attended by the Hon'ble Vice Chancellor and all the Officers, Faculty, Staff and students of BASU along with their family members. Dr R K Sharma, the programme Coordinator concluded the programme with a song.

Other Programmes under the aegis of NSS

World Zoonosis Day: BASU celebrated the World Zoonosis Day on July 6th, 2019 in which Dr Ashok Kumar, Head, Department of Neurology, IGIMS, Patna was the Chief Guest. Hon'ble Vice Chancellor along with the DSW, Director Research and other senior officers, faculty members, students and staff participated in the programme. All the students and Officers were vaccinated against rabies disease.

**Students of BASU taking Rabies Vaccine on
“World Zoonosis Day-2019”**



Van Mahotsava: Van Mahotsava was organized on 1st August 2019. The venue of the programme was University Play Ground of BASU. Two hundred saplings of timber wood were planted in the premises of University. Officers, faculty members, students and staff actively participated in 'Van Mahotsava' programme to make the campus more green and clean and create awareness about importance of trees in our ecosystem and mitigating the effects of global warming and climate change.



**Hon'ble Chief Minister and Deputy Chief Minister, Govt. of Bihar planting sapling and
inaugurating the “Van Mahotsava -2019”**

Swachchhata Pakhwara: Fifteen Days “Swachchhata Pakhwara” programme was organized from 1st to 15th September 2019. During this campaign, the premises of Bihar Veterinary College Campus including hostels were cleaned and sanitized with the help of students, faculty members and staff.

Rally on “Say No to Use of Plastic Bags”: On 2nd October, 2019, a rally on “No Use of Plastic Bags” was organized to create awareness about the menace of plastic. In the morning, after Yoga, pledge was taken to refrain from use of plastic bags. A 'Nuukad Naatak' was also organized by the students of BASU. Hon'ble Vice Chancellor, BASU, Dr Rameshwar Singh, addressed the participants and flagged off the rally. Officers, faculties, students and staff of the University participated in the rally and formed a human chain to show the solidarity and determination against use of tobacco and no use to Plastic Bags.



Hon'ble Vice-Chancellor, Director Students Welfare, Faculties and Students of BASU taking part in “Rally on Say No to Use of Plastic Bags - 2019”

World AIDS Day: A run was organized on “World AIDS Day” on 1st December 2019 to create awareness about AIDS. The run was organized in collaboration with Bihar Aids Control Board, Department of Health, Govt. of Bihar. Thirty-one (31) participants, mostly students of the BASU participated in the run that started from Raj Bhawan to Bihar Military Police, Patna, where a number of other events were also scheduled.

National Youth Day: Cultural and Literary Society, and National Service Scheme jointly organized the programme in Conference Hall of Bihar Veterinary College on 13th January 2020 with the objective to inculcate values and create awareness amongst youth.

Human Chain for Jal Jivan Hariyali: To create awareness about conservation of ecosystem including life, water and plants, human chain formation programme was organized by Govt. of Bihar in which students and staff of Bihar Animal Sciences University under the leadership of Hon'ble Vice Chancellor, BASU, Senior Officers participated. This programme was organized at Bailley Road Patna.



Hon'ble Vice-Chancellor, Officers and students of BASU participating in “Human Chain on Jal Jivan Hariyali - 2020”

International Yoga Day: The International Yoga Day was celebrated online which included on-line Yoga Demonstration and talk on the lifestyle counselling on 21st June 2020. Mr. Neeraj Pandey, Yoga Teacher and Lifestyle Counsellor from Kolkatta demonstrated different yoga exercises. Hon'ble Vice Chancellor, BASU was the Chief Guest and about 50 staff including officers, faculty members, some of the students also participated in this programme.

Sports and Games

First Inter-College Sports meet was organized on 07-09 December, 2019. Athletic competitions were organized in Bihar Animal Sciences sports ground while other events viz. Badminton, Volley Ball, Table Tennis and Kabaddi competitions were organized at SGIDT premises. A panel of independent judges from the

organizations like Bihar Military police, BIT Patna and Bihar Volley Ball Association were constituted to evaluate the performance of students of different constituent colleges of BASU. Dr Rameshwar Singh, Vice Chancellor, BASU, Dr. Amir Subhani, IAS, Additional Chief Secretary, Government of Bihar and Director Student Welfare, BASU, Patna along with other senior officers, faculty, staff and teachers were present during the inauguration of 1st Sports Meet program on 7th December, 2019.

Students of all the three constituent colleges of the University participated and made spectacular performances. 97 students (61 boys and 36 girls) from the three colleges participated in different events which included 1500m race, 800m race, 400m race, 200m race, 100m race, 4x100m relay race, javelin throw, shotput throw, discus-throw, long-jump, high-jump, volleyball, table tennis, kabaddi and badminton. All together 77 medals/trophies were distributed. Mr. Prince Kumar and Ms. Deepshikha student of Bihar Veterinary College were awarded the titles of overall champions in boys and girls categories, respectively. Valedictory and prize distribution function was organized on 9th December, 2020. Dr. Ratna Sanjay, IPS, IG Bihar Police was the Chief Guest and Dr. Rakesh Kumar, O/C, Games and Sports, BASU, Patna presented the report card of the events organized. Prize distribution was jointly done by the chief guest Dr. Ratna Sanjay, IPS, IG, Bihar Police and Hon'ble Vice Chancellor, BASU, Patna. Based on the performance of students of different constituent colleges in different events, University team for different sports and athletics events were selected and they participated in the XX All India Inter Agricultural Universities Sports and Games Meet 2019-20 held at Tirupati, Andhra Pradesh held from 01-05 March 2020.



Hon'ble Vice-Chancellor, Director Students Welfare, BASU and Mr. Aamir Shubhani, IAS, Additional Chief Secretary (Home), Govt. of Bihar lighting the torch (Mashaal) during “1st Inter College Sports Competition – 2019” and students of BVC, SGIDT, Patna and COF, Kisanganj taking part in the event.



Students of BASU participating in race, high jump and playing kabaddi during “1st Inter College Sports Competition – 2019”



Students playing Table-Tennis during “1st Inter College Sports Competition – 2019”, and Hon'ble Vice Chancellor along with other officers awarding trophies and students with their trophies.

Students of the College of Fisheries also participated in sports meet of the University held at Patna and won seven medals (1 gold, 2 silver and 4 bronze).



Students of College of Fisheries taking part in different events during the first inter-college sports meet of Bihar Animal Sciences University, Patna

National Cadet Corp (NCC)

Enrolment of students of 2019-20 batch in NCC was completed in November, 2019. Routine classes of NCC and drill practice were conducted by staff from NCC, Patna. NCC 'B' certificate exam of the first batch of University NCC cadets was conducted in February, 2020.

Students activities at College of Fisheries, Kishanganj

Van Mahotsav, 2019: College celebrated Van Mahotsav on 2nd August 2019 by planting 300 plants (Amaltas- 50, Mango (Amrapali) - 100 and Ashok – 150. Plantation was done by the students and faculty members in the farm area of College premises. The plantation drive was also attended by Shri U. N. Dubey, Range Officer, Department of Forest, Government of Bihar and his team. The motto of this plantation drive was “**Haraa Parisar, Haraa Parisar**” in line with the initiative of Hon'ble Chief Minister of Bihar, Shri Nitish Kumar ji and His Excellency the Governor of Bihar and Chancellor of the University.



Plantation drive on Van Mahotsav 2019 at College of Fisheries, Kishanganj

Celebration of Hindi-Diwas, 2019: College celebrated Hindi-Diwas on 14th September, 2019. In this programme, various activities like essay writing in hindi, poem recitation and hindi bhashan were organized to promote and popularize the Raj-bhasha Hindi.



Speech competition on occasion of Hindi-Diwas on 14th September, 2019

Students Educational Tour: Study-cum-sample collection tour of B. F. Sc. third semester students' of 2018 batch was arranged from 23-25th October, 2019 for exposure of cold-water fisheries and different cold-water habitats. In this tour, students visited cold-water glacier lake (Changu lake), different sites on the stretch of river Teesta in Sikkim. Various fish species, aquatic weeds, water and soil samples were collected by them followed by laboratory examination of the same.



Visit to Changu lake (above 10000 ft), Sikkim

Human-Chain Formation on Jal-Jeevan-Hariyaali mission: Students of college of fisheries also participated in 16444 Km long human chain in support of Jal Jeevan Hariyaali Campaign organized by Government of Bihar on 19 January, 2020. As per the directives of the state government, very first Tuesday of every month was celebrated as Jal-Jeevan-Hariyaali day at the college campus.



College students participated in 16444 Km long human chain in support of Jal Jeevan Hariyaali Campaign organized by Government of Bihar



Photos of Jal-Jeevan Hariyaali Day celebrated on 3rd March, 2020

College Week Celebration, 2020: College week “TARANG” was organized from 18th to 23rd February 2020 at college. This six-days celebration included 26 cultural, literary, sports and games events. All the students were divided into three groups namely, King Octopus, Queen Dolphin and Wild Shark. King Octopus was the overall champion of this event.



Various activities during College Week, 2020 “TARANG”

NSS Activities: Various activities under the aegis of National Service Scheme (NSS) unit of the College were conducted during. During the programmes, cleaning of college premises (Swacch Bharat Mission of Government of India), mass plantation drive and awareness rally on plastic-free campus were undertaken by the students and faculty members of the college.



Various activities undertaken by NSS Unit of the College of Fisheries, Kishanganj

Celebration of World Environment Day: World Environment Day, 2020 was celebrated in the College on 5th June, 2020. On this occasion, Dean, College of Fisheries Dr. V. P. Saini and other faculty members planted 20 fruiting plants in the premises.



7



Faculty Development
Programmes- Workshops,
Trainings and Conferences
organized and attended

A. International Trainings of Faculty Members under NAHEP

<i>S.N.</i>	<i>Name of Faculty</i>	<i>Institute Visited</i>	<i>Duration</i>
1	Dr. Pankaj Kumar Singh	Institute of Food & Agricultural Sciences, University of Florida, Gainesville, Florida, USA	06 March 2020 to 15 May 2020
2.	Dr. P. Kaushik	Institute of Food & Agricultural Sciences, University of Florida, Gainesville, Florida, USA	06 March 2020 to 15 May 2020
3.	Dr. Kaushalendra Kumar	AgResearch Limited, Grasslands Research Centre, Palmerston North, New Zealand	27 February 2020 to 5 June 2020
4.	Dr. Anil Gattani	University of Missouri, Columbia, MO (USA)	15 July 2019 to 14 October 2019

B. Trainings, Workshops and Webinars organized

- i) Fourteen faculty members from Departments of Veterinary Medicine, Surgery, Gynecology & Obstetrics, Pathology, Parasitology, LPM and Nutrition successfully completed 23 days training on “Intervention in wild-life disease and management in captivity and field” at Wild Life Institute of India (WII), Dehradun. This training programme was jointly sponsored by Govt. of Bihar, Zoological Society of London, Wild Life Institute of India and University of Edinburg. As per the suggestions of WII, the University incorporated certain important topics related to wild-life in the B.V.Sc. &A.H. course-curriculum syllabus after due approval of the Academic Council of the University.
- ii) Dr. Sanjeev Kumar organized a workshop on “Awareness-cum-Helpdesk Programme” under Viksit Bihar ke Saat-Nischay programme of Govt of Bihar at SGIDT, Patna on 13.12. 2019 for students and faculty of SGIDT, Patna.
- iii) Department of Dairy Technology organized the workshop on “Recent Developments on Near-Infrared Reflectance Spectroscopy (NIRS) Technology on 'Proximate analysis of various constituents of milk and milk products, meat, food & feed”, sponsored by Foss India, on 04.03.2020.
- iv) A workshop-cum-training program on “Recent Advances in Dairy Processing” was organized at SGIDT, Patna under NAHEP from 3rd to 4th Sept. 2019. Dr. Sanjeev Kumar was the coordinator of the workshop and objective of the program was to deliver and discuss about the recent advances in dairy processing for enhancing the knowledge of the students and faculty.



- v) Under NAHEP, SGIDT, Patna organized a seminar on Supplementation of Probiotics through Fermented Dairy Products on 30th of Nov. 2019. During this seminar, Dr. P. H. Halami, Principal Scientist, CFTRI, Mysore delivered lecture on “Supplementation of probiotics through fermented dairy products and Dr. J. Badshah, University Professor, Dairy Engineering delivered a lecture on “Design and analysis of fermentor for fermented dairy products”.
- vi) Seminar on Application of Bacteriophages in the Milk and Dairy Sector was organized at SGIDT, Patna on 10th and 11th December, 2019 in which, Prof. Olivia McAuliffe from Ireland delivered her lecture on “Current and potential applications of bacteriophages in the milk and dairy sector: the future for control and detection of pathogens.” Dr. Pradip Behare, Scientist, NDRI, Karnal delivered lecture on “Exopolysaccharides of lactic acid bacteria: from technological to health aspects”.



**A Seminar on Application of Bacteriophages in the Milk and Dairy Sector”
organized on 10 December, 2019 at SGIDT**

- vii) One-day workshop on Development of Soft Skills for Entrepreneurship among Agri-Graduates was organized on February 24, 2020 in collaboration with National Academy of Agricultural Research Management, Hyderabad at SGIDT, Patna.
- viii) On-line three days' workshop on “Advances in Milk and Milk Processing” was conducted from May 13-15, 2020 at SGIDT, Patna. Dr. Subroto Hatti, Assistant Professor A.A.U., Anand delivered lecture on “Application of naturally occurring bio-preservatives in milk and milk products on 13.05.2020 and

Dr. Pradeep Behare, Scientist, NDRI, Karnal delivered the lecture on “Safety aspects of fermented milk products”. Dr. Y. S. Rajput, retired Head, Dairy Chemistry Division, NDRI, Karnal delivered on-line lecture on “Quality assurance in milk processing” on 14th May, 2020. Dr. R.S. Dalal, Retd. Professor, Extension & former Registrar, HAU, Hissar addressed the students and faculty on Entrepreneurship development for dairy industry” on 15th May, 2020.

- ix) A webinar series on “Developing Human Resources in Dairy Industry” was organized in SGIDT, Patna from 20th to 22nd of May 2020. Dr. Sangram Chaudhary, M.D. Mother Dairy, Fruits & Vegetables Pvt. Ltd., New Delhi delivered lecture on “Dairying: a symbiotic relationship for sustainable development, livelihood and food security for Asian countries. Dr. Harsev Singh, former Country Head, Reliance Dairies, New Delhi delivered series of lectures for students and faculties from 20-22 May, 2020. In his lectures, he focussed on “what Industry needs from dairy graduates to become successful dairy professionals” Besides, he also made two more comprehensive presentations and provided tips to the students about “how a dairy professional can become a good manager” as well as “how a good manager can become a successful leader”. On 21st May 2020, Dr. R.S. Dalal, former Director Extension, HAU, Hissar delivered a talk on “Dairy industry during Covid-19 lockdown. The webinar series was organized under the chairmanship of Dr. B.S. Beniwal, Dean, SGIDT.

Workshops, seminars, symposia, training programmes and conferences attended

- Annual Convention of ISVM & National Symposium on “Advancement in Veterinary Medicine in Mitigating Challenges to Animal Health” in the Department of Veterinary Medicine, Veterinary College, Hebbal, Bengaluru (5th – 7th February 2020).
- International Conference on “Nutritional strategies for improving farm profitability and clean animal production” organized by Animal Nutrition Association of India at Bishwa Bangla Convention Centre, Kolkata, West Bengal (17th to 19th Dec, 2019).
- International symposium on global prospective to enhance livestock fertility through modern reproductive techniques for doubling farmer's income, organized by TANUVAS, Namakkal, (18th -20th Dec'2020).
- International Veterinary Webinar on “Role of Environment on Animal and Human Health- a Different Perspective” organized by Indian Veterinary Association, and Embassy of France, New Delhi (21-06-2020).
- International Webinar on “Career opportunities Abroad - A Veterinarian Prospective” organized by C.V. Sc. & A.H. Mhow (13th June, 2020)
- International Webinar on “English in a global world: The importance of quality assessment and digital learning in times of coronavirus: where we were where we are and where we are heading” organized by Oxford Education, Oxford University (25th June – 2020).
- National Webinar on “Rebooting Indian Economy - response to foster recovery post COVID-19”, organized by Patliputra University, Patna (June 28-29 June, 2020).

- National webinar on “prospects of Animal husbandry in milue of Aatm-nirbhar bharat”. Organized by ANDUAT, Kumarganj, Faizabad (27th June, 2020).
- National Workshop on “An Insight to Research Proposals, Statistical Techniques and Intellectual Property Right” organized by College of Veterinary Science and Animal Husbandry, MHOW (26th – 28th June-2020).
- National Workshop on “Career Development Centre at IGKV, Raipur organized by ICAR-NAARM.on Feb 14, 2020,
- One Day National webinar on “Prospect of Animal Husbandry sector in Milieu of Aatm Nirbhar Bharat” organised by C.V.Sc. & A.H. NDUAT, Kumarganj, Ayodhya on June, 27th, 2020.
- One Week- Faculty Development Programme On “Futuristic Approach and Professional Preparation in Physical Education” from 27th June to 3rd July, 2020. Organized by YMCA College of Physical Education, Chennai, Tamil Nadu.
- One-day International workshop on Holistic approach towards diagnostic and management of Canine Cardiac Disorder on 20th may2020, organized by Nanaji Deshmukh, Veterinary Science University, Jabalpur
- One-day workshop on “In silico and cell culture techniques as an alternative to animal use” on 17th December, 2019 at C.V.A.Sc., Mannuthy, Thrissur, Kerala.
- Online International Workshop on "An approach to wildlife anaesthesia, surgery and management" conducted by College of Veterinary Science & A.H., Rewa (M.P.) during 11th July, 2020 to 13th July, 2020.
- Presented research paper in XIX Annual Conference of ISVPT and National Symposium on “Pharmacogenomics on the development and validation of indigenous drugs” from 18 - 20 December, 2019 at C.V.A.Sc., Mannuthy, Thrissur, Kerala.
- Presented research paper on “Biofabrication of gold nanoparticles using *Moringa oleifera* leaf extract and its cytotoxic effect” in 4th National Seminar on Current Research in Veterinary Biochemistry and Biotechnology in the improvement of Animal Health and Production on 4th- 5th February, 2020 organized by Department of Veterinary Biochemistry, C.V.Sc., Tirupati (A.P.).
- Presented research paper on “Impedance spectroscopic delineation of catalytic activity of PPR virus neuraminidase” in 4th National Seminar on Current Research in Veterinary Biochemistry and Biotechnology in the improvement of Animal Health and Production on 4th – 5th February, 2020 organized by the Department of Veterinary Biochemistry, C.V.Sc., Tirupati (A.P.).
- Seven days training program on 'Doubling farmers income through advances in animal disease diagnosis and management” organized by ICAR-Research complex for Eastern region, ICAR Parisar, Patna (28/02/19 to 06/05/20)
- Seven days training school on “Advanced Instrumentation & Analytical Techniques for Natural Products (AIAT-19)” organized by CSIR-CIMAP, LUCKNOW (16th to 22nd August 2019).

- Three days Training on “TLC/ HPTLC” at India Specific HPTLC Applications Research Laboratory, Mumbai (9th to 11th September, 2019).
- Two Days National webinar on “Covid-19: Immunopathology, Clinical Manifestations and Therapeutic Measurements Organised by Department of Zoology and Internal Quality, Assurance cell (GMS PG College Ujjain (30th June 2020).
- Two days' National Conference of IAVMI held at IVRI, Izatnagar, Bareilly (6th -7th February, 2020).
- XXXIV Annual Convention-2019 of Indian Association of Veterinary Anatomy and National Symposium on Recent Advances in Veterinary Anatomy and its Application in Clinical Sciences at Karnataka Veterinary, Animal and Fisheries Sciences University, Bidar (28th to 30th Nov. 2019).



Awards and Honours

A. Awards and Recognitions of Faculty

SN	Name of Faculty	Details of Award received
1.	Dr. Ankesh Kumar Deptt. of Veterinary Medicine	<ul style="list-style-type: none"> • <i>Certificate of Best Oral Presentation Award</i> at National Conference on “Doubling farmer's income for sustainable and harmonious agriculture (DISHA-2019)” organized by BAU, Ranchi, Jharkhand: (10-11th August 2019) • Ram Singh Memorial National Animal Welfare Award 2020 by Pashudhan Praharee. • Awarded Second Best Poster Presentation at ISSGPU-2019, BASU, Patna • Awarded Second Best Poster Presentation at XXXII Annual Convention of IAVMI, 2019, BASU, Patna.
2.	Dr. S.K. Bharti Deptt. of Veterinary Anatomy	<ul style="list-style-type: none"> • “SAS Best Researcher Award-2019” in Veterinary Science Category at “SAS International Conference” organized by Scholar Academic and Scientific Society Registered under society registration act XXI of 1860). • “Outstanding Young Professional Award 2019” in National Conference on Doubling Farmers Income for Sustainable and Harmonious Agriculture (DISHA-2019), Organized by Birsa Agricultural University, Ranchi, Jharkhand.
3.	Dr. Ajeet Kumar, Deptt. of Veterinary Biochemistry	<ul style="list-style-type: none"> • Awarded best paper presentation in 4th National Seminar on Current Research in Veterinary Biochemistry and Biotechnology in the improvement of Animal Health and Production organized by the Department of Veterinary Biochemistry, C.V.Sc., Tirupati (4th - 5th February, 2020).
4.	Dr. Ajit Kumar, Deptt. of Veterinary Parasitology	<ul style="list-style-type: none"> • Winner of Award of All India Technical Article (Veterinary and Animal Husbandry) Writing Competition 2020. Topic: अजीत कुमार एवं अरविन्द कुमार दास- 2020-पशुओं में सर्वा रोग एवं इसके रोकथाम. https://www.epashupalan.com.
5.	Dr. Manoj Kumar, Deptt. of Veterinary Microbiology	<ul style="list-style-type: none"> • “Certificate of Commendation” from Environment, Forest & Climate Change Department, Govt. of Bihar for control of outbreak of “Avian Influenza” at Sanjay Gandhi Biological Park, Patna on “World Environment Day, 2019”.
6.	Dr. Kaushal Kumar, Deptt. of Veterinary Pathology	<ul style="list-style-type: none"> • Dr. M. L. Malhotra Memorial Award for Best Poster presentation award by Indian Association of Veterinary Pathologists (IAVP), Izatnagar, UP. (22-23 Feb, 2020) • Best Oral Presentation Award (2019) during National Conference on Doubling Farmers Income for Sustainable & Harmonious Agriculture (DISHA-2019) organized at BAU, Ranchi. • Outstanding Young Professional Award (2019) by Science & Technology Society for Integrated Rural Improvement, Telangana.
7.	Dr. Imran Ali, Dept. of Veterinary Pathology	<ul style="list-style-type: none"> • Best oral Presentation Award in Zonal Conference of Indian Association of Veterinary Pathologists (IAVP) at BAU, Ranchi (22-23 Feb, 2020).
8.	Dr. Sanjeev Kumar, Dept. of Veterinary Pathology	<ul style="list-style-type: none"> • Second Best paper presentation award (22-23 Feb, 2020), in Zonal Conference of Indian Association of Veterinary Pathologists (IAVP) at BAU, Ranchi.

9.	Dr. Deepak Kumar, Dept. of Veterinary Pathology	• Best Poster Award-2019 by Indian Association of Veterinary Microbiologists, Immunologists and Specialists in Infectious Diseases at BVC, Patna.
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B. Awards to Post graduate students: Nine students attended different seminars and conferences and twelve students attended trainings and workshops during 2019-20 and some of them won awards too.

S. No.	Student Name	Details
1.	Dr. Komal M.V.Sc. Veterinary Biochemistry	Best Poster Award at 4 th National Seminar and Annual Convention on "Current Research in Veterinary Biochemistry and Biotechnology in the improvement of Animal Health and Production", at College of Veterinary Science, SVVU, Tirupati on 4-5 February 2020. Third Position in International poster presentation competition on different versatile pharmacophore used for COVID -19, Organised by Association of Professionals in Biotechnology and Pharmaceutical Research (APBPR) on 10 th May 2020
3.	Dr. Sweta Kumari M.V.Sc. Surgery and Radiology	Third best Presentation at National Symposium on 'Recent Advances in Diagnostic Pathology for Emerging and Re-emerging Diseases of Livestock, Poultry Under Farming Conditions and Wildlife', at CVSc, &AH; AH, BAU, Ranchi on 22-23 Feb 2020.
4.	Dr. Prashansa Sinha M.V.Sc. Surgery and Radiology	Best Paper Presentation at National Symposium on 'Recent Advances in Diagnostic Pathology for Emerging and Re-emerging Diseases of Livestock, Poultry Under Farming Conditions and Wildlife', at CVSc, &AH; AH, BAU, Ranchi on 22-23 Feb 2020.

A. Bihar Veterinary College, Patna**a) Research and other Publications**

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2. Bhoomika, S., Hazari, R., Yadav, J.P., Pathak, R., Satyaprakash, K., Gourkhede, D., Malik, S.V.S., Barbuddhe, S.B. and Rawool, D.B. (2019). Comparative evaluation of methicillin-resistant and methicillin-sensitive *Staphylococcus aureus* of livestock origin for antibiotic sensitivity, biofilm formation and virulence in *Galleria mellonella*. *J. of Anim. Res.*, **9**(5): 775-781.

3. Bomminayuni, G. P., Mendiratta, S. K., Talukder, S., Chand, S., Jaiswal, R. K. and Mishra, V. (2020). Differentiation of fresh from frozen thawed chevon by citrate synthase enzymatic assay. *Int. J. Curr. Microbiol. App. Sci.*, **9(06)**: 1330-1338.
4. Choudhary, R. K., Roy, A., Singh, N.K., Kumar, S. and Singh, R. K. (2020). Effect of bypass protein on milk production and economics of lactating crossbred cows. *J. Agric. Res.*, **7(1)**: 40-43.
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8. Jaiswal, K.R., Mendiratta, S. K., Talukder, S, Soni, A., Chand, S. and Saini, B. L. (2020). Application of lipase based enzymatic time temperature indicator (TTI) as quality marker for frozen chicken meat. *Food Sci Technol Res.*, **26(1)**: 9-16.
9. Jithin, M.V., Mondal, D.B., Raguvaran, R., Kumar, B., Mandal, R.V.S, Bhatt, S., Singh, K.P. and Madhesh, K. (2020). Hepatoprotectant potential of sodium alginate coated catechin nanoparticle (SACC-NPs) in rat model. *Inorg. Nano-Met. Chem.*, **50(12)**: 1334-1342
10. Kumar, A., Prasad, J.K., Ghosh, S.K., Das, G.K., Kumar, B., Yadav, H.C. and Katiyar R. (2019). Effect of volume of washing fluid on bacterial load in preputial wash, fresh and post-thaw semen in crossbred bulls. *Pharma Innovation*, **8(9)**: 244-248.
11. Kumar, B., Sahoo, A.K., Dayal, S., Das, A.K., Taraphder, S., Batabyal, S., Ray, P.K. and Kumari, R. (2019). Investigating genetic variability in Hsp70 gene-5'-fragment and its association with thermotolerance in Murrah buffalo (*Bubalus bubalis*) under sub-tropical climate of India. *Cell Stress Chaperon.*, **25(2)**: 317-326.
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21. Kumar, R., Kumar, B., Kumar, S., Singh, M.K. and Kumar, R. (2020). Study of biochemical parameters in canine parvo-viral infection in canines. *Pharma Innovation*, **9**(4):40-43.
22. Kumar, S. and Kumar, B. (2020). Hemato-biochemical changes and spatial distribution of lesions on body surface in demodicosis affected dog. *Pharma Innovation*, **9**(4):178-180.
23. Kumar, S., Kumar, B., Kumar, N., Singh, S.P. and Kumar, R. (2019). Amelioration of oxidative stress due to infection of *Demodex canis* in dogs with herbal extract of *Moringa oleifera*. *Int. J. Chem. Studies*, **6**: 388-391.
24. Kumar, S., Kumar, B., Kumar, S. and Kumar, R. (2019). Successful management of canine atopic dermatitis in dog. *J. Agric. Res.*, **6**:124-126.
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38. Nirala, R. K., Anjana, K. and Raj, P. (2019). Medicinal plants and its activity against helminth. *J. Pharmacogn. Phytochem.*, **8** (10): 61-69.
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2. Ravindra Kumar, J.K. Prasad and Pallav Shekhar (2019). Handbook for Veterinarian. BASU Publication.
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B. Sanjay Gandhi Institute of Dairy Technology, Patna

a) Research Publications

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6. Badshah, J. and Kumar, Sanjeev (2020). Dairy arithmetic of milk and milk products for sustainable dairy entrepreneurship. *Journal of Agrisearch*, 6 (special Issue), pp: 146-149.
8. Behare, Pradeep and Kumar, Sanjeev (2020). Exopolysaccharides producing lactic acid cultures for Indigenous fermented milk products. *Journal of Agrisearch*, 6 (special Issue):142-145.
9. K., R. Harsimra, Khatkar, Sunil, Mann, A. Panghal, N., and Kumar, Sanjeev (2019). The conceptual understanding of nutrikinetics: A futuristic approach for designing health foods. *Nutrition and Food Science*. Issue Oct, 2019. <https://doi.org/10.1108/NFS-01-2019-0016>.
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b) Popular articles

1. Sanjeev Kumar, and Suryamani Kumar (2019). Khoa Ke Vibhin Utpad (Hindi Article) Krishi Manjusha (ISSN-2582-144X): April, Vol 2, 2019.
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4. अवधेश कुमार. झा एवं सोनिया कुमारी (2020). स्वच्छ दूध उत्पादन की अनिवार्यता एवं उपाय. मार्च 16, 2020. <http://kisanbharti.com/quality-milk-production-need-and-techniques>
5. सोनिया कुमारी एवं अवधेश कुमार. झा (2020). सुक्ष्मजीवी: कृषि एवं डेयरी में महत्त्व. 46-47, कृषि मञ्जूषा, अप्रैल 2020.
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10. संजीव कुमार एवं सोनिया कुमारी (2019). खोया के विविध उत्पाद. कृषि मञ्जूषा . 2:58-60

c). Books Published

- Sanjeev Kumar, Awadhesh Kumar Jha and Sonia Kumari (2019). Agri-search Question Bank for JRF, SRF, NET and ARS Exams in Dairy Technology. (<https://jsure.org.in>)

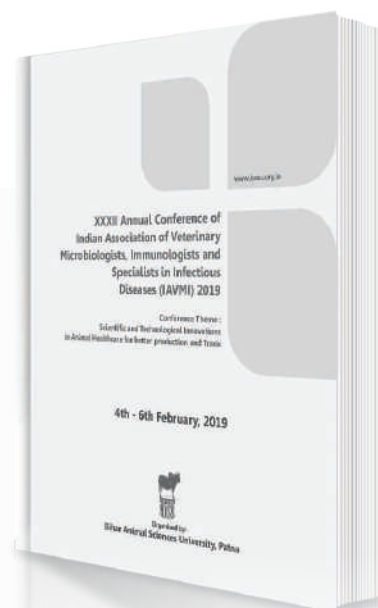
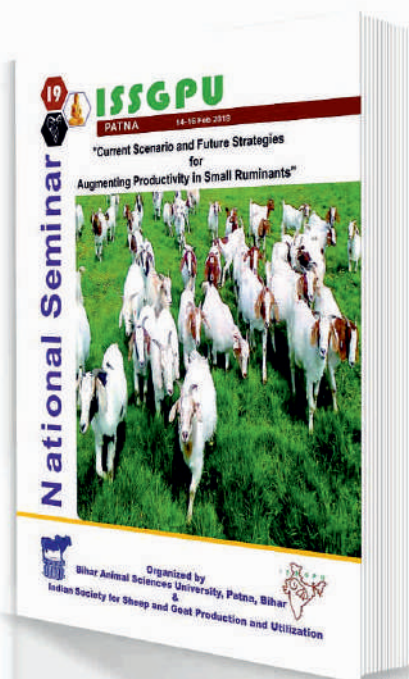
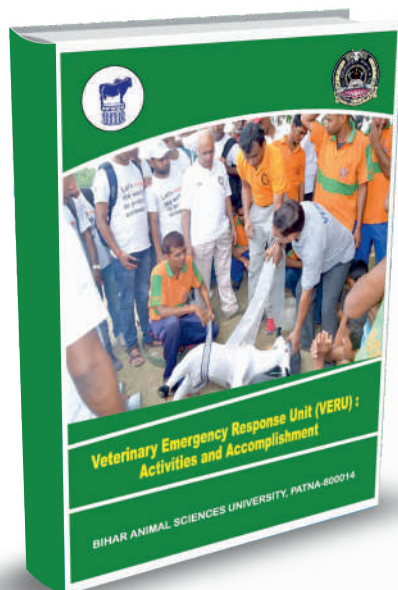
C. College of Fisheries, Kishanganj

a) Popular Articles:

1. Ravi Shankar Kumar et al. (2019) on Governance and Management of Small Scale Fisheries of Bihar in online magazine Aquafind.
2. Ravi Shankar Kumar et al. (2019) on Low consumption of fish in India: Causes and Solution- An elasticity Approach in online magazine Aquafind.
3. Narendra Kumar Verma (2020) on Sahkari samiti dwara machli palan in BASU website (Kisan Samvaad)

4. Ravi Shankar Kumar (2020) on Matsya palan me udhamita in BASU website (Kisan Samvaad)
5. Bhartendu Vimal (2020) Meethe jal ki machhliyon mein hone wale rog, roktham ke upay ewam unka upchaar in BASU website (Kisan Samvaad)

Our Publications





10

Renovation and Maintenance Works

Estate Office of the University looked after complete repair and maintenance works in University buildings which included civil, electrical, water supply, sanitary installation and all other repair and renovation works.

- (i) **Civil Maintenance Works:** Civil Maintenance works included masonry, carpentry and all types of colour washing, painting, oil bound distempering, polishing and water proof cement painting work etc. with the help of outsourced staff and contractors selected through committee/tender in the campus of Bihar Veterinary College, Sanjay Gandhi Institute of Dairy Technology and BASU Headquarter.

Special efforts were also made to economize the expenditure on maintenance by managing all types of masonry and carpentry work using the materials collected from old dismantled buildings of the University.

- (ii) **Electrical Maintenance Works:** Supervised the complete electrical maintenance works in the campus including Sub-station, fire-fighting system, Generators, Lifts, air conditioning, water-cooler, geysers, etc.

Power backup arrangements has been done important sections of the University for un-interrupted power supply during power cuts so that working of Colleges and University may not suffer for want of power supply.

- (iii) **Supervision and recording of solar power generation having total capacity of 310 kw.**

Location Where Installed	Boy's Hostel No. -1 BVC	Boy's Hostel No. - 2 BVC	Boy's Hostel No. -3 BVC	M.V.Sc. Building BVC	SGIDT
Plant Capacity	50 KWp	60 KWp	50 KWp	50 KWp	100 KWp
Total Power Generation (Period from April 2019 to March 2020)	50,534 KWH	59,725 KWH	47,627 KWH	54,192 KWH	87,021 KWH
Saving amount	147,054/-	1,73,799/-	1,38,594/-	1,57,698/-	170561/-
Total amount	7,87,706/-				

Following civil and electrical works were executed by the Estate Office during the financial year 2019-2020.

	Civil Works Executed	
1.	Paver's Block Pathway, drain cover in the campus of TVCC.	10,04,963 /-
2.	Renovation of M.V.Sc Building.	14,52,500 /-
3.	Repair of Boundary wall of TVCC, Girl's Hostel, EMU Closure, Anatomy Bld., along Road. No.-10.	5,97,700 /-
4.	Interior works False Ceiling & wall panelling of Registrar's Chamber, at Kishan Ghar, Patna.	2,72,400/-
5.	Renovation of SGIDT Dean's Chamber.	2,74,200/-
6.	Repair to Qtr. C-1 of Lab Assistant at Road No.-3.	2,69,400/-
7.	Renovation of Pathology Building.	12,69,100/-
8.	Repair and Renovation of Physiology Classroom & ELT Classroom at BVC.	7,19,800/-
9.	Widening and Strengthening of Bituminous Road in the Campus of BVC and TVCC.	1,23,85,180/-

	Work done by hiring outside labours	
10.	Repair and Painting works of Aashray, Medical Store, Registration Counter, Small Animal OT, Large Animal OT, Baloo Ghar, Loading /Unloading Platform, Gynaecology building etc. in the Campus of TVCC (Wall Painting, wood painting, grill repair and painting, shed roof painting etc.)	Saved approx 5,00,000/-
11.	Repair and Painting works of Kishan Bhawan.	Saved approx 1,00,000/-
12.	Dismantling of Old boundary wall in the Campus of TVCC and in - front of Main Building of BVC Stacking of all the serviceable bricks, reinforcement and disposal of Garbage from site.	Saved approx 1,00,000/-
13.	Construction of 19 number Tree Guards in the Campus of TVCC and BVC with old bricks collected from dismantling of boundary wall.	Saved approx 7,50,000/-
	Electrical Works Executed	
14.	Eelectrification work in Registrar's Chamber.	1,39,080/-
15.	New electric wiring work of Girl's Hostel of BVC.	12,20,667/-
16.	New Electric Wiring work and other electrical fittings/accessories in first floor of MVSc. Building.	11,77,073/-
17.	New electric wiring work for renovation and upgradation of physiology lecture hall.	4,09,917/-
18.	Renovation of Electric Wiring and other electrical fittings/accessories of Main Building BVC.	9,69,969/-

Department has very good liaison with B.C.D. Patna, Municipal Corporation (PMC) and Patna Electric Supply Undertaking (PESU).

Construction of New Campus

Office of Director Works & Plant of the University is responsible for New constructions. Director Work & Plant heads the office and looks after all the activities with the help of engineers and staffs.

During the year under report, following activities were initiated for development of the newer infrastructure. which is under different stage of completion/approval.

1. Administrative Approval of Rs. 419.919 Lacs was accorded by Animal and Fisheries Resources Department for construction of boundary wall of the open land at Aamkoda and open land near B.M.P. Surya Mandir. The construction work is to be executed by Building Construction Department and it is likely to start soon.
2. **Construction of Embryo Transfer Technology Lab:** Estimate for administrative approval amounting to Rs. 2.41 crores has been received from Building Construction Department of Govt of Bihar. The estimate has been sent to Project Director, B.L.D.A for administrative approval, which is expected soon. The construction work by the Building Construction Department of Govt. of Bihar is expected to start soon.
3. **Construction of new building for BASU and construction of boundary wall :** Total build up area proposed to be constructed for the University is 1.92 lac square meter which includes Administrative Building, Academic Building, Veterinary Clinical Complex, Auditorium, Outdoor and Indoor sports Complex, Hostels for male and female students (U.G. and P.G.), Farmer's Training Centre, Scientist's Hostel, residences for Hon'ble Vice Chancellor, Senior Officers, Faculty Members and non-teaching staff, Shopping Centre etc. and buildings for other services. Estimated cost of the project is Rs. 889.26 cores. Administrative Approval for this construction has been accorded by the Govt. and this work will be undertaken by Building Construction Department, Govt. of Bihar.

Building Construction Department engaged M/S MURALAGE, Lucknow as consultant for the project and Lay-Out Plan and Architectural Designs was prepared by M/S Muralage, Lucknow. It was presented before the Hon'ble Chief Minister, Bihar on 27-08-2019. On 01-09-2019, Chief Secretary, Bihar and other Senior Officers of Govt. visited the campus of B.A.S.U. and the Site – Plan was modified after relocating few buildings on recommendation of the Committee of Senior Officers. The Buildings have been designed as state-of-art with contemporary architecture incorporating the latest and most modern features. Salient feature of the proposed “New Buildings” are:

- (i) **Green buildings features:** The master plan has been designed as an energy efficient, eco-friendly 'Green Campus' with zero discharge.
- (ii) **Water Harvesting System.**
- (iii) **Solar Lighting and Solar Panels.**
- (iv) **Base Isolation System** for protection against severe earthquake in Academic Building, Administrative Building and Veterinary Clinical Complex, Presently, Sardar Patel Bhawan on Baeily Road is the only building which has been constructed using “Base Isolation System” and Bihar Animal Sciences University shall be the 2nd in Bihar to use base- isolation system in buildings.

Administrative Approval of the Project has been accorded by the Govt. Tender for construction work has been invited by Building Construction Department and construction work is likely to start soon.

Cattle Unit: It has Sahiwal, Bachhaur, Red Sindhi, Jersey-Cross and HF-Cross animals and the present strength of animals in this unit is:

Livestock Farms

Livestock Farm Complex of Bihar Veterinary College, Patna was established in 2007 for imparting hands on instructions to undergraduate students of BVC as per Minimum Standards of Veterinary Education Regulations of VCI. It not only caters to teaching and research needs of the students of BVC, but also of Sanjay Gandhi Institute of Dairy Technology. LFC comprises of cattle unit, buffalo unit, and sheep and goat unit.

Cattle Breeds	Adult males	Adult females	Heifers	Growing Males	Female calves	Male Calves	Total
Sahiwal	01	25	15	02	06	03	52
Bachhaur	02	08	00	00	01	08	19
Red Sindhi	00	02	03	00	00	00	05
Cross-breed	00	23	08	00	03	10	44



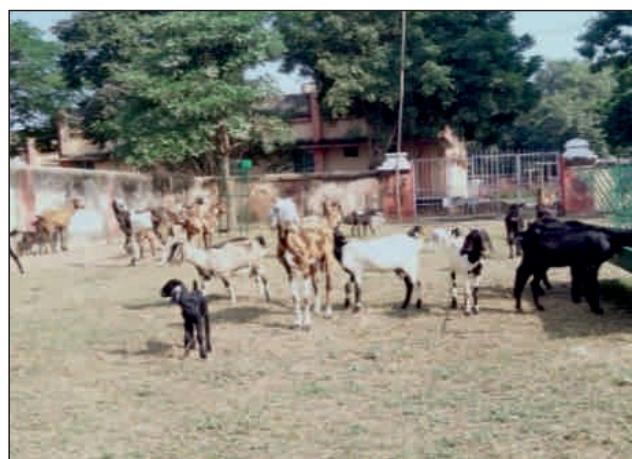
Buffalo Unit: Livestock Farm Complex is maintaining few buffaloes of Murrah and Nilli-Ravi breeds for teaching and research purpose as per the details given below:

Buffalo Breeds	Adult male	Adult female	Heifers	Growing Males	Female calves	Male Calves	Total
Murrah	01	06	06	00	03	00	16
Nilli-Ravi	01	04	02	01	01	01	10



Sheep & Goat Unit: For teaching and research purpose, few heads of Black Bengal and Sirohi goats and crosses of Sonadi and Corridal sheep are being maintained as per details given below:

Species of animal	Female	Male	Female kids/lambs	Male kids/lambs	Total
Black Bengal Goats	18	03	04	02	27
Sirohi Goats	07	03	00	01	11
Cross -bred Sheep	25	07	03	01	36



Fodder Production Unit: Livestock Farm Complex has 23 acres fodder production unit in which round the year seasonal green fodder (berseem, oats, sorghum-sugar-graze and Napier grass) is being cultivated for feeding to animals and the surplus fodder is being used for preparation of silage for feeding during lean period. In addition, *Moringa oleifera* and subabool has also been planted for supplementary feeding of animals as and when required.



Feed preparation Unit: Besides growing green fodder for animals, University prepares its own concentrate feed and mineral mixture after procuring raw materials from the local market.

Vermicomposting Unit: University has recently also started a new vermicomposting unit to produce quality compost at Livestock Farm Complex and the compost prepared is being used at the University green-fodder production unit.



Embryo Transfer Technology (ETT) Centre : Department of Animal Husbandry, Dairying and Fisheries, Govt. of India under Gokul Mission had sanctioned an infrastructure development project on “Embryo Transfer Technology (ETT)” with the objective of conservation and propagation of indigenous cattle breeds of the state and country and to set up the “Bull-mother station for elite bulls of different breeds of cattle.

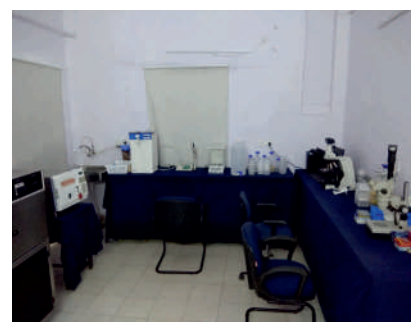
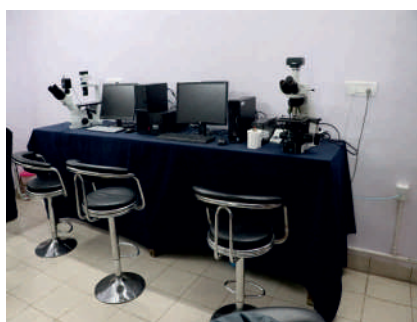
After launch of this project, University has purchased Sahiwal, Bachaur and Red Sindhi cows and we are in the process of procuring Gangatiri, another indigenous breed of the state of Bihar and UP. Some of the major equipment required for the project have already been purchased and installed in the ETT lab. Process for construction of the newer laboratories for this project by Bihar Construction Department has already been initiated and it is likely to be completed soon. 04 Scientists/teachers engaged in the project have already been provided an opportunity to undertake the desired hands on training in ETT and 01 in IVF. After training, these scientists have standardized the necessary experimental protocols as well for superovulation, embryo collection and preservation.



Embryo-transfer technology laboratory

Major Activities and Achievements of BASU under ETT Project :

- Five elite Red Sindhi animals were purchased from UKLDB (Uttarakhand) in February, 2020.
- 10 Elite Sahiwal cows/heifers have been purchased from UP Pandit Deen Dayal Upadhyay Pashu Chikitsa Vigyan Vishwavidyalaya Evam Gau Anusandhan Sansthan, Mathura.



13

Distinguished Visitors

S.No.	Name of Visitor	Title and affiliation
1.	Dr. K. P. Singh	Professor and Founding Chair, Department of Epidemiology & Biostatistics, School of Community and Rural Health, University of Texas Health Science Centre, Tyler, U.S.A.
2.	Prof. Satish Kumar Garg	Dean, College of Veterinary Science & A.H., DUVASU, Mathura and a renowned Pharmacologist and Toxicologist.
3.	Dr. A.M. Thaker,	Former Dean, College of Veterinary Science & A.H., AAU, Anand
4.	Dr. Vinod Kumar,	Professor & Head, Department of Veterinary Pharmacology & Toxicology, College of Veterinary and Animal Sciences, LUVAS, Hisar
5.	Dr. Chandana Choudhary Barua	Professor & Head, Department of Veterinary Pharmacology & Toxicology, College of Veterinary Science & A.H., AAU, Guwahati
6.	Dr. D. V. Singh	Professor and Head, Department of LPM, GBPUAT, Pantnagar
7.	Dr. S. S. Lathwal	Principal Scientist, Division of LPM, NDRI, Karnal
8.	Dr. P. K. Dogra	Professor and Head, Department of LPM, CSKPKV, Palampur
9.	Dr. Naveen Kumar	Principal Scientist (Fodder Production), CSKHPKV, Palampur
10.	Dr. V.V. Kulkarni	Ex- Director, NRC on Meat, Hyderabad
11.	Dr. Naveena	Principal Scientist, NRC on meat, Hyderabad
12.	Dr. Manish Chatli	Prof.-cum-Head, Dept. of LPT, GADVASU, Ludhiana
13.	Dr. A.K.Singh	Principal Scientist, Division of Dairy Technology, NDRI, Karnal
14.	Dr. M.C. Sharma	Ex Director, IVRI, Izatnagar
15.	Dr. S. N. S. Randhwa	Ex Dean PGs and Director Research, GADVASU, Ludhiana
16.	Dr. D. Swarup	Ex Director, CIRG, Mukhdoom
17.	Dr. Mahesh Kumar	Professor and Head, Veterinary Medicine, GBPUAT, Pantnagar
18.	Late. Dr Kriti Dua	Professor and Head Deptt. of Wild Life, Veterinary College, GADVASU, Ludhiana
19.	Dr. Vijay Kumar	Head Veterinary Medicine, Veterinary College, Nammmakal
20.	Dr. Rajat Garg	Senior Scientist, Division of Parasitology, IVRI, Izatnagar, Bareilly
21.	Dr. K. N Bhilegaonkar	Principal Sct. IVRI, Pune
22.	Dr. R. A Hazarika	Professor and Head, AAU, Gauwahati
23.	Dr. Namita Joshi	Prof. and Head VPH, CoVS, NDUAT, Ayodhya
24.	Dr. Naresh Kumar Sood	Professor of Veterinary Pathology, GADVASU, Ludhiana
25.	Dr. KK Singh,	Department of Veterinary Pathology, College of Veterinary & Animal Sciences, Birsa Agricultural University, Kanke, Ranchi.
26.	Dr. Rajesh Kumar Asrani	Professor, Department of Veterinary Pathology, Dr. GCN College of Veterinary & Animal Sciences, CSK HPKV, Palampur

27.	Mr.Sudhir Kumar Singh	M.D, Jharkand State Cooperative Milk Producers Federation, Ranchi
28.	Dr. Sunil Khatkar	Asst. Professor, GADVASU, Ludhiana
29.	Dr. S. Kanawjia	Emeritus, Scientist, NDRI, Karnal
30.	Dr. R.S. Dalal	Former Registrar, HAU, Hisar
31.	Dr. Y.S. Rajput	Former Head, Dairy Chemistry, NDRI, Karnal
32.	Dr. D. K. Srivastava	MD, Muzaffarpur
33.	Mr. P. K. Sinha	CEO, Nalanda Dairy
34.	Dr. S N. Thakur	MD, PDP, Patna
36.	Dr. D C. Sen	Former Professor, WBUAVS, Kolkata
37.	Dr Pradeep Behare	Senior Scientist NDRI, Karnal
38.	Dr. S. K. Tomar	Principal Scientist, NDRI, Karnal

14

University Budget
for 2019-20

A) Financial Support from Govt. of Bihar (Rs in lacs)

Sl.No	Scheme	Salary	Infrastructure development	Contingency	Total	Expenditure
1.	Non-Plan BVC and SGIDT	2,816.40	Nil	Nil	2,816.40	4711.19
2.	Plan-BASU	568.00	1,728.00	504.00	2,800.00	2215.83
3.	Plan-College of Fisheries	232.00	11.00	4.00	247.00	819.95
	Total	3,616.40	17,39,00,000.00	5,08,00,000	5863.40	7746.97

B) Externally Funded Projects

Sl.No.	Budget Head	Sanctioned Amount (Rs. In lacs)	Expenditure (Rs. in lacs)
1.	ICAR-NAHEP	145.50.00	73.54
2.	Embryo Transfer Technology	806.00	90.40
3.	Poultry Seed Project	41.00	21.30
4.	NASF	10.85224.00	6.57
5.	AICRP on Animal Disease Monitoring and Surveillance	2.00	1.97
6.	Krishi Mantrana Project (CDAC, Kolkata)	11.67	4.25
7.	Outreach Programme on Monitoring of Drug Residues & Environmental Pollutants	7.21	5.75
8.	AICRP on FMD	1.50	Nil
	Total	1025.73224	203.78

C)KVK Jamui- Grants from ICAR and other sources

Sl.No.	Heads	Amount (Rs. in lacs)	Expenditure (Rs. in lacs)
1.	Salary & Allowances	173.51783	82.88
2.	General Fund	15.60	12.98
3.	SCSP Project	1.00	0.18
4.	PKVY Project on Fertilizer	0.50	0.38
5.	PKVY Project on KVK	3.30	Nil
6.	CSICA Project	1.60	Nil
7.	National Food Security Mission (CFLD)	1.848	1.32
8.	RKVY Project on KVK	3.29	2.08
9.	Plantation Programme	1.00	0.10
	Total	201.65583	99.92