



ANNUAL REPORT 2018-19

**West Bengal University
of Animal & Fishery Sciences**

Annual Report

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**West Bengal University of
Animal and Fishery Sciences**

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Foreword

Livestock and fish touch our lives in countless ways in terms of providing food, nutrition, livelihood, employment, recreation, companion and many more. India ranks first in milk production, second in fish production, third in egg production and the list goes on. Poultry and aquaculture are fastest growing segments of the agricultural sector in India and their growth rate today is around 6 to 10 percent per annum. Animal proteins, unlike plant proteins, are complete and contain a balanced combination of all essential amino acids, which the human body cannot synthesise and have to be supplemented through diet. Rising incomes that come with sustained economic growth would mean increased demand for animal protein in future and to meet that India has to produce more and more. To accelerate the growth further, the sector needs to adopt new technologies, innovations and problem-solving strategies. The beauty of Indian production system is that it is based on model of 'production by masses', while in the developed countries the model is 'mass production'. That means in India, the production mostly comes from backyard farming system where large numbers of small farmers are engaged in production, thereby together they contribute to large production. On the contrary, in developed countries few large farmers produce huge production. In brief, in India, the livestock and fishery sector provides livelihood support and gainful employment to large population (over 30 million people) and contributes to the socio-economic development of the country.

Currently, in Indian agriculture the focus is to double Farmers' income by 2022. In conventional agriculture, the real issue is not the level of productivity but how produce can be converted into value that will decide farmers' income. Therefore, the focus has shifted from increasing per acre productivity to gainfully employing farm households in allied activities like livestock rearing and fishery and to improve post-production value-addition. Driven by the structural changes in agriculture and food consumption patterns, the utility of livestock is undergoing a steady transformation. The non-food functions of livestock are becoming weaker. Importance of livestock as source of 'draught power' has declined due to mechanization of agricultural operations. On the other hand, their importance as a source of quality food has increased. Therefore, the cold chain network for animal products needs to be developed for mass storage and movement of perishable items. One of the many steps towards selling farmers' produce in better prices is creation of Farmers' Producer Groups and linking them with the electronic marketplace to sell their produce nationally.

The West Bengal University of Animal and fishery Sciences is contributing immensely in livestock and fishery sector of West Bengal state through quality education, need-based research and farmer-centric outreach programmes. It is a moment of pride to complete the 25 years of our

journey as a newly established University. Over these years, the University has grown in size and stature, and at the moment considered as a premium University in eastern India in its category. The year 2018-19 was an eventful year for the University as we have made a significant progress in all frontiers. Students of our University have ranked well at National level examinations and getting awards for their innovative research. The students from the neighbouring country of Bangladesh have come to the University for Internship training. Teachers and scientific officers of the University are being rewarded with externally funded projects through stiff competition. Apart from these academic and scientific excellences, the University has also performed well in outreach programmes to the farmers. The Krishi Vigyan Kendras (KVKs) of the University are constantly reaching to the farmers with problem-solving technologies. The extension literatures published by the University are reaching in the hands of the farmers and empowering them. I am confident that with the co-operation of all concerned, the University will scale greater heights. On behalf of the University, I express my sincere gratitude to Department of Animal Resource Development and Department of Fisheries, Government of West Bengal and other State agencies for their continued support. The University also extends its sincere thanks to Indian Council of Agricultural Research (ICAR) and other funding agencies for providing liberal grants for the research and other developmental works. I congratulate the Director of Research, Extension & Farms and his team for collecting and compiling relevant information for the Annual Report. I further appreciate the efforts of the editorial and publication board in bringing out the Annual Report in precise and attractive form. I look forward to suggestions and comments on the information contained in this publication, which would be useful for our future endeavours. I take this opportunity to appeal to all the readers to spread the good works of the University in the society, especially amongst the farming communities.



(Prof. Purnendu Biswas)
Vice Chancellor



Prologue

Animal Husbandry and Fisheries continue to be an integral part of Indian agriculture and play a prominent socio-economic role. These activities contribute not only to the food basket and draught animal power but also help in maintaining the ecological balance. Indian traditional, cultural and religious beliefs have further contributed in the continuance and flourishing of these activities. As per our constitution, agriculture including Animal Husbandry and Fisheries is a State subject and respective states are primarily responsible for its development, while the centre plays a supporting role. Our University is contributing to the development of this sector in the state of West Bengal through education, research and extension activities. The University is relentlessly working towards the dissemination of our research outputs which in turn helping increase in the production and productivity of all types of animal products in the state. In the year 2018-19, the University has made appreciable progress in creating infrastructure facilities and improving the research and outreach activities with the funds made available from State and Central Governments.

The publication of Annual Report 2018-19 is a cooperative endeavour of all the teaching departments, offices and units of the University. I am thankful to all the faculty members, officers, staff and students of the University for their timely Support in publishing this report.

I extend my gratitude to the Hon'ble Vice-Chancellor for his guidance and suggestions. I sincerely appreciate the efforts the Director of Research, Extension & Farms and his officers in bringing out this Annual Report. I trust that the university would accelerate its progress further to achieve greater height in the years to come.

(Prof. S S Dana)
Registrar (Actg.)

Preface



The Annual Report is the face of an organization and an important document to record its activities and achievements in a concise form as a ready reckoner. It is a matter of great privilege that the task of publishing the University Newsletter is entrusted with the Directorate of Research, Extension and Farms. Therefore, it gives me immense satisfaction in bringing out the Annual Report (2018-19) of the University. This Annual Report is the compilation of all important activities happened during the period from April 2018 to March 2019.

I wish to put on record my sincere admiration to the Government of West Bengal, Indian Council of Agricultural Research (ICAR) and other agencies for their sustained support and guidance. Grants sanctioned to the University provided the much needed impetus to carry out the various research and outreach programmes and helped in accomplishing several milestones. The guidance, encouragement and suggestions received from Hon'ble Vice Chancellor, Prof. Purnendu Biswas for publication of this Newsletter are humbly acknowledged. The directions and suggestions of the Executive Council and other statutory bodies of the University in identifying the goals, prioritizing and implement the same are duly acknowledged. The information from the different sections, viz. office of the Vice-Chancellor, Registrar, Controller of Examinations, Finance Officer, concerned Deans and HoDs of the teaching departments etc. is gratefully acknowledged. Last but not the least, the efforts made by the members of the editorial board as well as the officers of this Directorate are thankfully appreciated.

I hope that this report would be useful for its readers.

A handwritten signature in blue ink, appearing to read 'Arunasis Goswami', with a horizontal line underneath.

(Prof. Arunasis Goswami)
Director of Research,
Extension & Farms (Actg.)
& Editor

EXECUTIVE SUMMARY


Animal Husbandry and Fisheries, along with agriculture, continue to be an integral part of our life. These activities play a significant role in generating gainful employment in the rural sector, particularly among the landless, small and marginal farmers and women, besides providing cheap and nutritious food to millions of people. Owing to conducive climate and topography, Animal Husbandry, Dairying and Fisheries Sectors have played prominent socio-economic role in India and also help in maintaining the ecological balance. Of late, animal husbandry and fishery are growing faster than other agricultural sub-sectors and the trend is anticipated to continue. Therefore, effort for growth in livestock and other allied sectors have become essential to achieve an overall growth rate of 4% in the agriculture sector as visualized in the XI plan.

According to NSSO 66th Round Survey (July 2009 - June 2010) on Employment and Unemployment, 15.60 million workers as per usual status (Principal status plus subsidiaries status) were engaged in farming of animals, mixed farming and fishing. Whereas as per estimate of NSS 68th Round (July 2011-June 2012) survey on Employment and Unemployment, 16.44 million workers as per usual status (Principal status plus subsidiaries status) were engaged in the activities of farming of animals, mixed farming, fishing and aquaculture. Different types of technological interventions have been introduced in these sectors to attain this target. It is believed that this will lay concrete on for significant improvement in productivity and production which will in turn increase per capita availability of livestock and fishery products.

According to estimates of the Central Statistics Office (CSO), the value of output livestock sector was about Rs. 9,17,910 crore at current prices during 2016-17 which is about 31.25% of the value of output from agricultural and allied sector. At constant prices the value of output from livestock was about 31.11% of the value of the output from total agriculture and allied sector. Likewise, the total fish production in India is estimated at 12.61 Million Metric tonnes for the financial year 2017-18. The gross value addition of the fisheries and aquaculture sector during 2016-17 was Rs. 1,33,492 Crores which is about 0.96% of the National Gross Value Added (GVA) and 5.37% to the agricultural GVA (2016-17). During the year 2017-18, the country has exported 13,77,244 tonnes fish and fisheries products worth Rs. 45106.89 crore (7.08 billion US \$).

Doubling real income of farmers till 2022-23 over the base year of 2015-16, requires annual growth of 10.41 per cent in farmers' income. this implies that the on-going and previously achieved rate of growth in farm income has to be sharply accelerated. Therefore, strong measures will be needed to harness all possible sources of growth in farmers' income. In this context, livestock and fishery sector will play an important role. Higher growth rate in this sector could be achieved with intensive efforts of all the key stakeholders ushering into implementation of the developmental plans aligned to harness the potential of animal husbandry, dairying, poultry, piggeries and aquaculture which in turn would scale up the production and processing of milk, egg and meat etc. The livelihood of landless farmers can be improved with goat and swine husbandry besides backyard poultry and duck farming. Recommendations from the state include promotion of cage and pen culture in water surplus ecologies, documentation of Hot spot of zoonotic and other infectious diseases like anthrax, FMD, HS, BQ, PPR etc. in livestock. It also gave importance to the cultivation of improved varieties/cultivars of green fodder to meet up the scarcity. In fishery sector, focus must be on research, technology development and dissemination of knowledge for various activities like high-value fish culture, cage culture, ornamental fishery, adoption of innovative technologies like recirculating aquaculture system (RAS), Biofloc, in-pond raceways, etc. The 'crop-livestock-fish' integration should be emphasized to raise farmers' income and livelihood.

The State of West Bengal is performing well to enhance the productivity and production in livestock and fishery sector with the application of technologies and innovations. The West Bengal University of Animal and Fishery Sciences is contributing to development of location-specific and farmer-centric technologies. The



state has produced 5.39 million MT of milk in 2018-19. During 2016-17, the state produced 705 thousand MT meat and 6.55 million egg. It is holding first position in production of goat meat in the country. West Bengal is the second largest fish producing state in the country with annual production of 17.42 lakh tonnes. Besides, the state is the largest fish seed producer with record production of 12455 million fries in 2017-18. It is a moment of pride and accomplishment for the University to complete the 25 years of its journey as a newly established University. It is satisfying to note that over these years, the University has grown in size and stature. Our University has carved a niche in livestock and fishery sector of the state through quality education, need-based research and farmer-centric outreach programmes. While employment opportunity in traditional agriculture sector is shrinking in the state, the animal husbandry, dairy and fishery sector is offering great scope for employment, especially for rural youths and women. This has given huge responsibilities to the University to meet the expectations of the Government as well as the people. The University is relentlessly working towards increase in the production and productivity of all types of animal products through dissemination of our research outputs. Apart from the academic activities, lots of externally funded research projects are being carried out in the University. With these in perspective, the highlights of various activities of the University during the financial year of 2018-2019 are narrated below :

Institutional :

The 12th convocation was organized to confer degrees to 75 Under-graduate, 54 Post-graduate and 17 Ph.D. students under the three Faculties of the University. 26 students have received gold medals in the convocation in different disciplines for their academic excellence. The University has conducted several Conferences / Seminars / Symposiums during the reporting period. The Central Library with Information Network services is working in full fledged in all the three campuses to fulfill the objectives of the University.


Academic :

Keeping in view of the globalization and relevance to changing needs and aspirations in the field of animal sciences and fishery, the University has tailored its academic system dynamically. The educational activities in the University are regularly put under evaluation and accordingly modification of course curricula and teaching methodologies are made.

Since 2016-17, a two year Diploma Course in Veterinary Pharmacy with intake capacity of 30 has been introduced by the University. The University offers undergraduate courses of study in Veterinary and Animal Sciences, Dairy Technology and Fishery Sciences in its three respective Faculties. All these faculties have a provision of studying Masters degree courses as well as performing doctoral studies. As a program to extend the academic activities in areas of importance, four new departments have started functioning to introduce Post-Graduate courses in 'Animal Bio-technology' and 'Avian Science' under the Faculty of Veterinary and Animal Sciences and introduce one new department namely, 'Dairy Business Management' in the Faculty of Dairy Technology and 'Fish Nutrition' under the Faculty of Fishery Sciences each. Another recent addition to the feather in the cap is signing a MOU with Bangladesh University to carry on student and faculty exchange programmes.

Research :

The University is always interested in taking up newer research programmes for the interest of the farming population keeping in pace with the ever-changing scenario in the agricultural, animal husbandry and fishery sectors of the nation. During 2018-19, WBUAFS has bagged one prestigious project 'Establishment of Biotech-KISAN Hub' funded by the Department of Bio Technology, Ministry of Science & Technology, Government of India worth Rs. 1.37crores approximately. The University has already come up with several new technologies, which will help in enhancement of the income and livelihood security of the farming



community of the state. Currently 25 numbers of research projects are being carried out by the Faculty members, Scientists and Researchers of the University with a total fund allocation of Rs. 1183.97 lakhs. Two Outreach Programmes and one Project under “Tribal Sub Plan” funded by ICAR are running successfully under the proficient supervision of the respective Principal Investigators. Network Programme on Blue tongue has recently been successfully concluded after running for 18 years. AICRP on Black Bengal Goat, the other prestigious project of the University has been in action since 2000. Process is on to take up a few collaborative research projects very soon.

Extension :

Besides academic and research activities, another vital feature of the University is to render services to farmers and rural community for implementation of their own farming units. The University is continuously engaged in organizing different sorts of activities throughout the State to stretch out its area of action. University has been actively associated with need based training programmes, mass contact camps in the form of animal and fish health camps, farm and home visits, workshops, seminars, Kisan Mela, farm produce exhibitions, consultancy and advisory services, on-farm trial, frontline demonstrations, field days and other extension activities benefiting a good number of farmers of the state. The University also offers training for Master trainers’ of State level Extension Officers, Resource Persons of SHGs, Fisher folk of Sundarban and also organizes periodic National level training programmes for Extension Officers of different States. As per the MOU signed between the University and Agriculture Skill Council of India (ASCI) under the aegis of National Skill Development Corporation (NSDC), Ministry of Skill Development & Entrepreneurship, Govt. of India, various short term skill based training programmes, train the trainer programmes are being organized at the University at frequent intervals. This, in turn, helps to create skill development centres for training and capacity building across various segments of Animal Husbandry, Fishery and Dairy Sciences in the state.

Leaflets, Booklets, Books published and documentary films produced by the University are rich source of disseminating knowledge on latest technologies evolved by the University in livestock and fishery sectors. During the period, nearly 95 research papers were published in different national and international journals. Apart from this, University has published about 49 number of publications of leaflets, booklets, books, newsletter, manuals, compendiums annual reports and activity highlights.

Krishi Vigyan Kendras :

Three Krishi Vigyan Kendras (KVKs), namely North 24Parganas KVK, Murshidabad KVK and Jalpaiguri KVK are running under the aegis of the University with full financial assistance from Indian Council of Agricultural Research (ICAR). These KVKs act as doorways to the University for the farming community. All these KVKs are actively performing based on the mandates formulated by the and the University through mutual understanding. Besides the routine jobs like FLDs, OFTs, On & Off Campus Farmer’s trainings etc., the KVKs are also associated with special collaborative programmes of NABARD, ATMA etc. and other sponsored programmes such as PPV & FR, FOCT, Kisan Sammelan, Pradhan Mantri Fasal Bima Yojana, Swachh Bharat Aviyaan, Krishi Mela etc. KVKs are also implementing Tribal Sub Plan Programs and are associated with few Research Projects of the University. Besides, a number of activities have been taken up by the KVKs to reach farmers with a view to improving the farming status through scientific approach and also to fulfill the objective of ‘Doubling Farmers’ Income’ through integrated and comprehensive approach.

I. ABOUT UNIVERSITY

Development of any organization has always led the pavement for discovery of technology or opened a new arena in the different fields of scientific activities for fulfillment of its needs. In a similar fashion, the limitation of land resources in comparison to the worldwide human population has facilitated a search for alternative means of living using livestock resources viz., animals and fishes. People handling such living resources, faced challenges to maintain the flock under their control and hence, attention was given towards proper rearing of these livestock resources. Study of appropriate techniques, development of technology following the experiences, and high desire to improve the skills for rearing the animals and fish varieties lead to gathering of information in the related fields. This may be marked as the beginning of study of Veterinary and Animal Sciences as well as allied studies in the Dairy and Fishery sectors. In undivided India after establishment of Lahore Veterinary College in 1882, second such institution came up during British rule with the name Bengal Veterinary College on 10th of January, 1893. The West Bengal University of Animal and Fishery Sciences (WBUAFS) was established in 1995, thus fulfilling the dreams of the nation builders to promote education, research and extension activities in one of the important bread-earning sector of the rural people i.e., the Livestock Sector.

The University came into existence on 2nd January, 1995 vide West Bengal Act of 1995 with the three Faculties- namely Veterinary and Animal Sciences, Fishery Sciences and Dairy Technology. Process for extending the facilities of education in the existing faculties is continuous. A diploma course on **Veterinary Pharmacy** namely, DVP has been introduced by the University since 2016-17 under the financial assistance of Animal Resource Development Department, Govt. of West Bengal. This course, first of its kind has been introduced under any University in India. In another approach to meet up the demand of the livestock, poultry and fishery industries as well as to fulfill the recommendations of the ICAR & Executive Council of the University, the Govt. of West Bengal has approved the creation of four new Departments alongwith teaching and non-teaching manpower requirements. These are **Department of Animal Biotechnology & Department of Avian Science** under the Faculty of Veterinary & Animal Sciences, **Department of Fish Nutrition** under the faculty of Fishery Sciences and the **Department of Dairy Business Management** under the Faculty of Dairy Technology. The process for infrastructure development and recruitment procedure for these departments is on the way.

I.1. MANDATES OF THE UNIVERSITY

The mandates of West Bengal University of Animal and Fishery Sciences are as follows :

- a. To impart education in the branches of Veterinary and Animal Sciences, Fishery Sciences, Dairy Technology and allied sciences.
- b. To conduct basic and applied research in the field of Veterinary and Animal Sciences, Fishery Sciences, Dairy Technology for advancement of knowledge and enhancement of productivity to alleviate poverty and economic upliftment of the society.
- c. To undertake the development of such sciences or technologies and the extension thereof to the rural people in co-operation with the concerned Departments of Government of West Bengal.

1.2. CAMPUSES OF THE UNIVERSITY

Headquarter of West Bengal University of Animal & Fishery Sciences is situated at Belgachia, Kolkata which is one of the oldest campuses in the country for imparting education in the fields of Veterinary and Animal Sciences.

The undergraduate courses of the Faculty of Veterinary and Animal Sciences and undergraduate and postgraduate courses of the Faculty of Dairy Technology are taught in the Mohanpur Campus of the University situated in the adjoining Nadia district. Post-graduation studies for the Faculty of Veterinary and Animal Sciences take place in the University Headquarters. The courses under the Faculty of Fishery Sciences are undertaken in the Chakgaria Campus, in Kolkata, which is itself a full fledged unit of the University.

Besides these three Faculties, the University has three Krishi Vigyan Kendras in the districts of Jalpaiguri, North 24 Parganas and Murshidabad which functions under the supervision of the Directorate of Research, Extension & Farms. University communicates with the rural farmers and general public directly as well as through these extension centres.

II. SET UP OF WBUAFS

Education, Research and Extension activities of West Bengal University of Animal & Fishery Sciences (WBUAFS) is being managed utilizing the governing body set-up followed in the general State Agricultural Universities (SAUs). These are as follows :

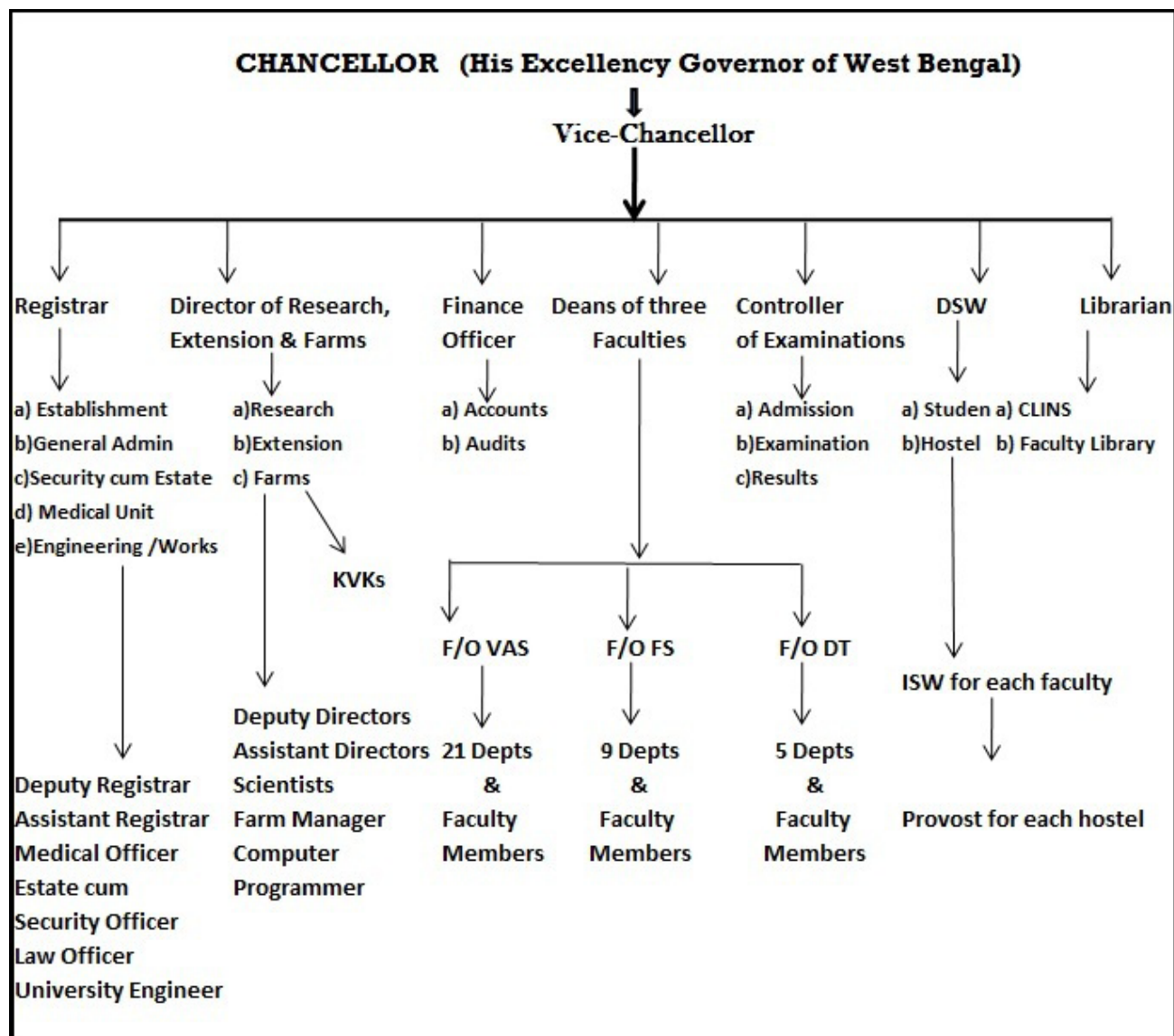
- ❖ Executive Council (EC)
- ❖ Faculty Council (FC)
- ❖ Academic Council
- ❖ Research and Extension Education Council (REEC)
- ❖ Finance Committee
- ❖ Board of Examinations
- ❖ Board of Studies

These bodies are reconstituted from time-to-time depending upon their tenure.

- The Executive Council (EC) is the highest policy making body in the University. All sorts of administrative decisions are approved in its meetings and implemented thereafter.
- The Faculty Council (FC) looks upon the academic affairs of the University and is the authority for control and maintenance of the standards of education, and examination along-with the conferment of the degrees and diplomas towards the courses enrolled by the students of the three faculties.
- The Academic Council controls general regulations on teaching and examination system standards set-up in the University.
- The Finance Committee governs the policy for financial and accounting information of the University.
- The Research and Extension Education Council (REEC) makes and controls the policies of the University on the areas of Research and Extension Education in the Faculties as well as Research Stations of the University.

The overall activities of the University taken up for Education, Research and Extension oriented development is monitored by the Vice Chancellor with the assistance of the statutory officers, viz., Registrar, Director of Research, Extension & Farms, Finance Officer, Controller of Examinations, Deans of the Faculties, Librarian along with other various authorities, Committees and Sub-Committees constituted by the University from time to time.

II. 1. ADMINISTRATIVE ORGANOGRAM OF WBUAFS



II. 2. STATUTORY BODIES :

II.2.1. EXECUTIVE COUNCIL

Sl.No.	Name & Designation	Position in EC
1	Prof. P. Biswas Vice Chancellor	Chairman
2	Captain A.G. Bandopadhyay Director of Animal Husbandry & Vety. Services, Dept. of ARD, Govt. of West Bengal	Member

Sl.No.	Name & Designation	Position in EC
3	Director of Fisheries, Govt. of West Bengal	Member
4	The Milk Commissioner, Govt. of West Bengal	Member
5	Prof. A.Goswami Director of Research, Extension & Farms (Actg.), WBUAFS	Member
6	Prof.A.K. Sahoo Dean, F/O Veterinary and Animal Sciences, WBUAFS	Member
7	Prof. B.K. Das Dean, F/O Fishery Sciences, WBUAFS	Member
8	Prof. T. K. Maity Dean, F/O Dairy Technology, WBUAFS	Member
9	Prof. S. Batabyal Teacher's Representative, F/O Veterinary and Animal Sciences, WBUAFS	Elected member
10	Dr. Supratim Chowdhury Teacher's Representative, F/O Fishery Sciences, WBUAFS	Elected member
11	Dr. P.K. Roy Teacher's Representative, F/O Dairy Technology, WBUAFS	Elected member
12	Sri Arup Sardar Non-Teaching Staff Representative, WBUAFS	Elected member
13	Students' Representative, WBUAFS	Elected member
14	Smt. Mala Saha (MLA representative nominated by West Bengal Legislative Assembly)	Nominated Member
15	Dr. J.K. Jena DDG (Fishery Sciences), ICAR	Nominated Member
16	Dr.Ravinder Kumar Representative Veterinary Council of India	Nominated Member

Sl.No.	Name & Designation	Position in EC
17	Smt. Swagata Das Sri Madan Mohan Maity Sri Abhijit Pramanick Three members from farmers or producers of the state nominated by the State Govt.	Nominated Member
18		
19		
20	Prof. S.S. Dana, Registrar (Actg.)	Registrar & ex-officio Non-member Secretary

II.2.2. FACULTY COUNCILS

Sl.No.	Post	Position
1	Vice Chancellor	Chairman
2	Registrar	Member
3	Director of Research, Extension & Farms	Member
4	Librarian	Member
5	Controller of Examinations	Invitee Member
6	Dean of the respective Faculty	Member
7	All Heads of the Dept. of respective Faculty	Member
8	Professor from the respective Faculty	Elected Member
9	Reader from the respective Faculty	Elected Member
10	Lecturer from the respective Faculty	Elected Member
11	UG student from the respective Faculty	Elected Member
12	PG student from the respective Faculty	Elected Member
13	Secretary, Faculty Council	Member Secretary

II.2.3. BOARD OF STUDIES

Sl.No.	Composition of Board	Position
1	Head of the Department	Chairman & Convener
2	All the full time teachers of the Department	Members

II.2.4. BOARD OF EXAMINATIONS

Sl.No.	Composition of Board	Position
1	One of the Deans from the three Faculties	Chairman (By rotation)
2	Registrar	Member
3	Deans of Faculties	Member
4	Controller of Examinations	Member Secretary

II.2.5. ACADEMIC COUNCIL

Sl.No.	Composition of Council	Position
1	Vice Chancellor	Ex-officio Chairman
2	Director of Research, Extension & Farms	Member
3	Deans of Faculties	Member
4	Registrar	Non Member Secretary
5	Controller of Examinations	Member
6	Librarian	Member
7	All Heads of the Departments from all the Faculties	Member
8	One Lecturer, one Reader and one Professor from each Faculty	Member
9	One UG student from each Faculty and one PG student from the University elected by the regular students in a manner as shall be prescribed	Member
10	Two eminent academicians from the field of Veterinary/Dairy/Fishery Sciences nominated by the Vice Chancellor	Member

II.2.6. RESEARCH AND EXTENSION EDUCATION COUNCIL

Sl.No.	Composition of Council	Position
1	Vice Chancellor	Chairman
2	Director of Research, Extension & Farms	Member Secretary
3	Director of Animal Husbandry & Vety. Services, Govt. of West Bengal	Member
4	Director of Fisheries, Govt. of West Bengal	Member
5	Deans of Faculties	Member
6	Head of all Research Stations and Project Coordinators of State/ ICAR/other agencies, Research schemes	Member
7	Three scientists of eminence to be nominated by the Vice-Chancellor for their specialized knowledge, one for each faculty for a period of two years	Member
8	Three progressive farmers associated with Veterinary, Animal Husbandry, Fisheries, Dairy Technology Practices to be nominated by the Vice-Chancellor	Member

II.2.7. FINANCE COMMITTEE

Sl.No.	Composition of Committee	Position
1	Vice Chancellor	Ex-officio Chairman
2	MLA Representative	Nominated Member of EC
3	Secretary, Finance Dept., Govt. of West Bengal or his/her representative	Member

Sl.No.	Composition of Committee	Position
4	Secretary, Animal Resources Development Dept., Govt. of West Bengal or his/her representative	Member
5	Secretary, Fisheries Dept., Govt. of West Bengal or his/her representative	Member
6	Director of Research, Extension & Farms	Member
7	Finance Officer	Member Secretary

II.3. ORGANIZATION OF MEETINGS OF DIFFERENT STATUTORY BODIES

Executive Council Meeting		
Sl.No.	Meeting No.	Date
1.	96	14/06/2018
2.	97	25/07/2018
3.	98	10/10/2018
4.	99	26/02/2019

Faculty Councils		
Sl.No.	Meeting No.	Date
Veterinary and Animal Sciences		
1.	77	23/04/2018
2.	78	24/07/2018
Fishery Sciences		
1.	56	23/04/2018
2.	57	24/07/2018
Dairy Technology		
1.	52	23/04/2018
2.	53	24/07/2018

II.4. TEACHING DEPARTMENTS OF THREE FACULTIES OF WBUAFS

F/O.Vety. & Animal. Sciences	
Sl No	Name of Department
1	Animal Biotechnology
2	Animal Genetics and Breeding
3	Animal Nutrition
4	Avian Sciences
5	Livestock Farm Complex
6	Livestock Production Management
7	Livestock Products Technology
8	Veterinary Anatomy & Histology
9	Veterinary Biochemistry
10	Veterinary Clinical Complex
11	Veterinary Epidemiology & Preventive Medicine

Sl No	Name of Department
12	Veterinary Gynaecology & Obstetrics
13	Veterinary Medicine, Ethics & Jurisprudence
14	Veterinary Microbiology
15	Veterinary Parasitology
16	Veterinary Pathology
17	Veterinary Pharmacology & Toxicology
18	Veterinary Physiology
19	Veterinary Public Health
20	Veterinary Surgery & Radiology
21	Veterinary & Animal Husbandry Extension Education

F/O. Fishery Sciences	
Sl No	Name of Department
1	Aquaculture
2	Aquatic Animal Health
3	Aquatic Environment Management
4	Fishery Economics & Statistics
5	Fishery Engineering
6	Fishery Extension
7	Fish Nutrition
8	Fish Processing Technology
9	Fishery Resources Management

F/O Dairy Technology	
Sl No	Name of Department
1	Dairy Business Management
2	Dairy Chemistry
3	Dairy Engineering
4	Dairy Microbiology
5	Dairy Technology

II.5. STATUTORY OFFICERS IN THE UNIVERSITY

Sl. No.	Designation	Name
1	Vice-Chancellor	Prof. P. Biswas
2	Director of Research, Extension & Farms	Prof. A. Goswami
3	Registrar	Prof. S.S. Dana
4	Finance Officer	Sri G.Majumdar
5	Controller of Examinations	Prof. M.K. Mondal
6	Dean, F/O Veterinary & Animal Sciences	Prof. A.K. Sahoo
7	Dean, F/O Fishery Sciences	Prof. B.K. Das
8	Dean, F/O Dairy Technology	Prof. T. K. Maity
9	Librarian	Vacant

II.6. OTHER OFFICERS IN THE UNIVERSITY

Sl. No.	Designation	No. of Posts
1	DSW	1
2	Secretary, Faculty Council	1
3	Deputy Registrar	2
4	Deputy Librarian	1
5	Deputy Director (Research)	2
6	Assistant Director (Research)	1
7	Assistant Director (Extension)	1
8	Assistant Director (Farms)	1
9	Scientist	2
10	Farm Manager	1
11	Computer Programmer	1
12	Medical Officer	1
13	Assistant Registrar	1
14	Assistant Finance Officer	2
15	Assistant Librarian	1
16	Estate cum Security Officer	1
17	Sports Officer	1
18	Law Officer	1

II.7. TEACHERS OF THE UNIVERSITY

Faculty of Veterinary & Animal Sciences

Department	Name of Teacher	Designation	Qualification
Animal Genetics and Breeding	Prof. P.K. Senapati	Professor	M.V.Sc., Ph.D.
	Prof. A.K. Sahoo	Professor	M.V.Sc., Ph.D.
	Dr. S. Taraphder	Associate Professor	M.Sc. Dairying, Ph.D.
	Dr. M. Roy	Assistant Professor	M.V.Sc., Ph.D.
	Dr. U. Sarkar	Assistant Professor	M.Sc. Dairying, Ph.D.
	Dr. A. K. Das	Assistant Professor	M.V.Sc., Ph.D.
	Dr. S.Datta	Assistant Professor	M.V.Sc. Dairying
Animal Nutrition	Prof. B. Roy	Professor	M.V.Sc., Ph.D.
	Dr. G. P. Mandal	Associate Professor	M.Sc.(Ani. Nutrition), Ph.D.
	Dr. A. K. Patra	Assistant Professor	M.V.Sc., Ph.D.
	Dr.P. N. Chatterjee	Assistant Professor	M.Sc.(Ani. Nutrition), Ph.D.
	Dr. S. Soren	Assistant Professor	M.V.Sc.
Livestock Farm Complex	Dr.M.C. Pakhira	Assistant Professor (Animal Nutrition)	M.V.Sc., Ph.D.
	Dr.(Mrs.) A.Pal	Assistant Professor (Animal Genetics and Breeding)	M.V.Sc., Ph.D.
	Sri D.C.Roy	Assistant Professor (Agronomy)	M.Sc. (Agronomy)
	Dr.C.P.Ghosh	Assistant Professor (Livestock Production Management)	M.V.Sc., Ph.D
	Dr. A.K. Das	Assistant Professor(Animal Genetics and Breeding)	M.V.Sc., Ph.D
	Dr.S. Datta	Assistant Professor(Animal Genetics and Breeding)	M.V.Sc.
Livestock Production Management	Prof. A. K. Samanta	Professor	M.V.Sc., Ph.D.
	Prof. R. Samanta	Professor	M.V.Sc., Ph.D.
	Prof. N. Ghosh	Professor	M.V.Sc., Ph.D.
	Dr. S.Bera	Assistant Professor& Head	M.V.Sc., Ph.D.
	Dr. S. Pan	Professor(Retired after superannuation)	M.Sc., Ph.D.
Livestock Products Technology	Prof. S.Biswas	Professor& Head	M.V.Sc, Ph.D.
	Dr. D.Bhattacharyya	Assistant Professor	M.V.Sc, Ph.D.
	Dr. G. Patra	Assistant Professor	M.V.Sc, Ph.D.

Department	Name of Teacher	Designation	Qualification
Veterinary Anatomy & Histology	Prof. S. Ray	Professor & Head	M.V.Sc, Ph.D.
	Prof. P. Das	Professor	M.V.Sc, Ph.D., PDF (Japan)
	Dr. A.K. Mandal	Associate Professor	M.V.Sc, Ph.D.
	Dr. N.K. Tudu	Assistant Professor	M.V.Sc, Ph.D.
Veterinary Biochemistry	Dr. S. Batabyal	Professor & Head	M.V.Sc., Ph.D.
	Dr. A. Maity	Associate Professor	M.V.Sc., Ph.D.
Veterinary Clinical Complex	Prof. S.K. Guha	Professor	M.V.Sc, Ph.D.
	Dr. M. Mondal	Associate Professor	M.V.Sc, Ph.D.
	Dr. S. S. Kesh	Assistant Professor	M.V.Sc, Ph.D.
	Dr. S. Chaudhuri	Assistant Professor	M.V.Sc, Ph.D.
	Dr. P. Mukherjee	Assistant Professor	M.V.Sc, Ph.D.
Veterinary Epidemiology & Preventive Medicine	Dr. C. Guha	Professor	M.V.Sc., Ph.D.
	Dr. U. Biswas	Professor	M.V.Sc., Ph.D.
	Dr. P. S. Jana	Assistant Professor	M.V.Sc., Ph.D.
Veterinary Gynaecology & Obstetrics	Prof. S. Basu	Professor	M.V.Sc., Ph.D.
	Prof. (Mrs.) K. Ray	Professor	M.V.Sc., Ph.D.
	Dr. P. R. Nandi	Assistant Professor	M.V.Sc.
	Dr. P. Sarkar	Assistant Professor	M.V.Sc.
	Dr. D. Mandal	Assistant Professor	M.V.Sc.
	Dr. A. K. Saren	Assistant Professor	M.V.Sc.
Veterinary Medicine, Ethics & Jurisprudence	Prof. S. Sarkar	Professor	M.V.Sc., Ph.D.
	Prof. C. Lodh	Professor	M.V.Sc., Ph.D.
	Dr. A.R. Gupta	Associate Professor	M.V.Sc., Ph.D.
Veterinary Microbiology	Prof. S. N. Joardar	Professor	M.V.Sc., Ph.D.
	Dr. D. P. Isore	Assistant Professor	M.V.Sc., Ph.D.
	Dr. I. Samanta	Assistant Professor	M.V.Sc., Ph.D.
	Dr. K. Batabyal	Assistant Professor & Head	M.V.Sc., Ph.D.
	Dr. S. Dey	Assistant Professor	M.V.Sc., Ph.D.
Veterinary Parasitology	Prof. S.C. Mandal	Professor	M.V.Sc., Ph.D.
	Dr. S. Baidya	Associate Professor & Head	M.V.Sc., Ph.D.
	Dr. (Mrs.) R. Jas	Assistant Professor	M.V.Sc., Ph.D.
	Dr. S. Pandit	Assistant Professor	M.V.Sc., Ph.D.
	Dr. A. Nandi	Assistant Professor	M.V.Sc.

Department	Name of Teacher	Designation	Qualification
Veterinary Pathology	Dr .S. K. Mukhopadhyay	Professor	M.V.Sc., Ph.D.
	Dr. S. Pradhan	Assistant Professor	M.V.Sc., Ph.D.
	Dr. N. C. Patra	Assistant Professor	M.V.Sc., Ph.D.
	Dr. R. N. Hansda	Assistant Professor	M.V.Sc., Ph.D.
	Dr. S.Mondal	Assistant Professor	M.V.Sc., Ph.D.
Veterinary Pharmacology & Toxicology	Prof. T. K. Mandal	Professor & Head	M.V.Sc., Ph.D.
	Dr. T. K.Sar	Sr. Lecturer	M.V.Sc., Ph.D.
	Dr. R.K. Dutta	Guest Teacher	M.V.Sc.
Veterinary Physiology	Prof. P.K. Das	Professor & Head	M.V.Sc., Ph.D.
	Dr. P. R. Ghosh	Associate Professor	M.V.Sc., Ph.D.
	Dr. K. Das	Assistant Professor	M.V.Sc., Ph.D.
	Dr. D. Banerjee	Assistant Professor	M.V.Sc., Ph.D.
	Dr. J. Mukherjee	Assistant professor	M.V.Sc., Ph.D.
Veterinary Public Health	Dr. C.Debnath	Associate Professor	M.V.Sc., Ph.D.
	Dr. I.Samanta	Assistant Professor	M.V.Sc., Ph.D.
Veterinary Surgery & Radiology	Prof. D.Ghosh	Professor	M.V.Sc., Ph.D.
	Prof. S.K. Nandi	Professor& Head	M.V.Sc., Ph.D.
	Prof. S.Hazra	Professor	M.V.Sc., Ph.D.
	Prof.S. Halder	Professor	M.V.Sc., Ph.D.
	Dr. A.K. Maji	Assistant Professor	M.V.Sc., Ph.D.
Veterinary & Animal Husbandry Extension Education	Dr. A.Goswami	Professor	M. V. Sc., Ph. D., D. Litt., FNAVS, FAST, FAPHV
	Dr. D.Ganguli	Assistant Professor	M.V.Sc., Ph.D.

Faculty of Fishery Sciences

Department	Name of Teacher	Designation	Qualification
Aquaculture	Prof. S. K. Das	Professor	M. Sc, Ph. D
	Prof. T. K.Ghosh	Professor	M. Sc, Ph. D
	Dr.A.Mondal	Associate Professor	M.F. Sc, Ph.D.
Aquatic Animal Health	Prof. G. Dash	Professor& Head	Ph.D.
	Prof. T. J. Abraham	Professor	Ph.D.
	SriPrasenjit Mali	Assistant Professor	M.F.Sc.
Aquatic Environment Management	Prof. S. K. Rout	Professor	M.F.Sc., Ph.D.
	Prof. B.K.Das & Dean	Professor (on lien)	M.Sc., Ph.D.
	Prof. R.K.Trivedi	Professor (on lien)	M.F.Sc., Ph.D.

Department	Name of Teacher	Designation	Qualification
Fishery Economics & Statistics	Prof. S.Sahu	Professor & Head	M.Sc, M.B.A., Ph.D.
Fishery Engineering	Prof. N.A.Talwar	Professor	M.F.Sc., Ph.D.
Fishery Extension	Prof. S. S. Dana	Professor	Ph.D.
	Dr.B.Saha	Associate Professor	Ph.D.
	Mrs. M. Ray Sarkar	Assistant Professor	M.F.Sc.
Fish Processing Technology	Prof. K.C Dora	Professor	M.F. Sc, Ph.D.
	Dr. S. Chowdhury	Associate Professor	M.F. Sc, Ph.D.
	SriPrasantaMurmu	Assistant Professor	M.F.Sc.
Fishery Resources Management	Prof. S. K. Das	Professor	M.F.Sc., Ph.D.
	Prof. S. Behera	Professor	M.F.Sc., Ph.D.
	Prof.T.S.Nagesh	Professor	M.F.Sc., Ph.D

Faculty of Dairy Technology

Department	Name of Teacher	Designation	Qualification
Dairy Business Management	Prof. T.K.Maity	Professor & Head (Actg.)	Ph.D (DM)
	Sri AvijitSarkar	Contractual Full time Teacher	M.Sc
Dairy Chemistry	Dr. Pinaki Ranjan Ray	Professor	PhD
	Dr. ChaitaliChakraborty	Associate Professor	PhD
Dairy Engineering	Dr. S.K.Bag	Professor and Head	M.Tech, Ph D
	Dr. P. Maiti	Professor	M.Sc ,Ph D
	Dr. P. K. Roy	Associate Professor	M.Tech, Ph D
	Mr. K. Halder	Assistant Professor	M. Tech
Dairy Microbiology	Prof. T.K. Maity	Professor (On Lien)	Ph.D (DM)
	Prof. Surajit Mandal	Professor	Ph.D (DM)
	Dr. Lopamudra Haldar	Associate Professor	Ph.D (DM)
	Mr. Amit Kumar Barman	Assistant Professor	M.Tech (DM)
Dairy Technology	Dr. Anindita Debnath	Assistant Professor	Ph.D. (Dairy Technology)
	Prof. M. K. Sanyal	Guest Professor	Ph.D. (Dairy Technology)
	Mr. Goutam Kumar Das	Assistant Professor (contractual)	M.Sc. (Dairy Technology)

II.8. STATE PUBLIC INFORMATION OFFICER

The mandate of Right to Information Act 2005 is timely response to citizen requests for government information. It is an initiative taken by Department of Personnel and Training, Ministry of Personnel, Public Grievances and Pensions to provide a- RTI Portal Gateway to the citizens for quick search of information on the details of first Appellate Authorities, PIOs etc.

Information can be sought by any citizen of India as per the Act. The University has appointed Dr. S Das, Scientist, DREF, WBUAFS as the State Public Information Officer of the University. Sri A. K. Chakraborty, Secretary, Faculty Council is the Appellate Authority under this system of providing information. The unit is functional since 2005.

II.9. COMPLAINTS COMMITTEE FOR PREVENTION OF SEXUAL HARASSMENT AT WORKPLACE

Sexual harassment at workplace violates the rights and opportunities of women to seek, obtain and hold employment without discrimination. West Bengal University of Animal & Fishery Sciences is always alert to provide a safe work environment to their women employees and include both preventive and remedial measures to make the work environment safe for women employees.

There exists a committee for this purpose in the University since 2004, which is reconstituted from time-to-time. The latest committee was reconstituted vide Notification No. WBUAFS/Admn/NC-2/768 dt. 27/03/2019 with 11 members including Presiding Officer Smt. Aparajita Biswas, Computer Programmer, DREF, WBUAFS and a third party NGO member.

III. FINANCIAL

Report of Finance & Accounts Section, WBUAFS for financial year 2018-19 :

Financial transactions handled by WBUAFS are mainly based on input from State Govt. Funds (both plan & non-plan and capital), Development Grants from ICAR and finance from outside agencies including Govt. of India. The pictures regarding inflow and outflow are depicted as below :

Sl. No.	Heads	Receipt (Rs. in Lakhs)
1.	State Govt. Grant	4229.70
2.	ICAR and Central Govt. Grant	895.37
3.	Internal Resources	530.01
Total		5655.08

Sl. No.	Heads of Expenditure (Rs. in Lakhs)	
1.	Teaching	3507.36
2.	Research	656.62
3.	Extension	169.35
4.	Education	265.37
5.	Administration	595.44
6.	Infrastructural Developments	145.97

IV. ACADEMIC

IV.1. Academic Programmes (Faculty Wise)

The West Bengal University of Animal and Fishery Sciences follows the syllabus framed by Veterinary Council of India (VCI) for the Faculty of Veterinary and Animal Sciences. The courses of Faculty of Fishery Sciences follow the syllabus adopted from Indian Council of Agricultural Research (ICAR) and the courses under Faculty of Dairy Technology are carried out following AICTE, New Delhi guidelines.

Courses offered by the University in the three faculties are as follows:

Faculty of Veterinary and Animal Sciences :

Name of Course	Duration	Student Intake
2018-19		
1. DVP	2 years Diploma in Vety Pharmacy	27
2. B.V.Sc. & A.H.	5 years Bachelor's degree	82
3. M.V.Sc.	2 years Master's degree	61
4. Ph. D.	3 years Doctoral degree	14
5. Ph. D. (Life Scs)	3 years Doctoral degree	20
6. Ph. D. (Ext. Edn)	3 years Doctoral degree	1

Faculty of Fishery Sciences :

Name of Course	Duration	Student Intake
2018-19		
1. B.F.Sc.	4 years Bachelor's degree	44
2. M.F.Sc.	2 years Master's degree	32
3. Ph.D.	3 years Doctoral degree	9

Faculty of Dairy Technology :

Name of Course	Duration	Student Intake
2018-19		
1. B.Tech. (DT)	4 years Bachelor's degree	44
2. M. Tech.	2 years Master's degree	8
3. Ph. D.	3 years Doctoral degree	---

The course curricula undergo modification from time to time following the recommendations of ICAR, VCI and AICTE.

IV.2. ADMISSION

IV.2.1. Admission Schedule

Admission to Undergraduate courses starts generally immediately before or soon after the publication of results of Higher Secondary Examination results conducted by the West Bengal Council of Higher Secondary Education.

In case of postgraduate and Ph.D. courses, admission takes place after qualifying in the Entrance Examinations. 15% seats are filled up by the ICAR nominees.

Academic Session

Diploma Course (DVP)

UG Courses

PG Courses

Ph.D Courses

Begins During

July

July

August – September

November – December

IV.2.2. Admission Requirements/Procedure For Two Year Diploma Course In Veterinary Pharmacy

Candidates seeking admission to the Diploma in Veterinary Pharmacy (DVP) course must secure minimum of 55% marks in Physics, Chemistry, Biology/Mathematics in the 10+2 examination. The admission of the students is on the basis of merit and the intake capacity for the course is 30 containing General and Reserved Category as per the Government rules. The course is running at Mohanpur campus under Faculty of Veterinary and Animal Sciences.

IV.2.3. Admission Requirements / Procedure For Undergraduate Studies

Candidates seeking admission to the B.V.Sc. & A.H. course must qualify in the West Bengal Joint Entrance Examination conducted for entrance to B.V.Sc.&A.H. course. The candidates qualified in the West Bengal Joint Entrance examination conducted for entrance into the Engineering/Technology courses are considered for entry to the B. Tech. (D.T.) course. For B.F. Sc. course application forms are generally available from few branches of UCO Banks as notified in the local daily newspapers. After 15 days of last date of receipt of application forms merit list is generally published on the basis of the marks obtained in the 10+2 Examinations.

The Undergraduate candidates must secure minimum 50% marks altogether in Physics, Chemistry, Biology, English and Vernacular in Higher Secondary or equivalent (10+2) examinations. The candidatures of other Board/Council (10+2) level passed from Institutions in West Bengal are considered provided that the candidate is a domicile of West Bengal. The Scheduled caste / scheduled tribe candidates must secure 40% marks instead of 50% marks altogether in Physics, Chemistry, Biology, English and Vernacular in Higher Secondary or equivalent (10+2) examinations.

22% of seats are reserved for SC and 6% for ST students out of the total number of seats. There is also a reservation of (10% + 7%) for the OBC candidates as per the State Govt. Norms. 15% seats are reserved for VCI nominees for the BVSc & AH course and 4 seats are reserved for BFSc and B.Tech (DT) courses each for ICAR nominees. 3% of seats are reserved for physically challenged candidates for each course.

IV.2.4. Admission Requirements For Master's Degree Studies

The candidates for Master's degree courses must have passed B.V.Sc.&A.H. / B.Sc. (D.T.)/ B. Tech. (D.T.)/ B. F. Sc. from a recognized University with 55% marks in aggregate (50% marks for SC/ST candidates) in traditional system or with a minimum 6.2 OGPA (6.0 for SC/ST candidates) in 10 point scale. Selection of candidates are carried out by University constituted Selection Committees for the purpose and admitted on the basis of merit and performance in the interview. The merit is decided on the basis of percentage of marks obtained in aggregate or OGPA in Bachelor's Degree Examinations as well as OGPA in subject concerned in which admission is sought. The relative weight-age on overall performance in Bachelor's Degree and in the subject concerned for Master's degree studies is given in the ratio of 2:1. Reservation is followed as per State Govt. rules. One seat is reserved for ICAR nominees.

IV.2.5. Admission Requirements For Doctoral (PHD) Studies

The candidates for Doctorate of Philosophy (Ph.D.) must have passed two years Master's Degree in Veterinary and Animal Sciences, Dairy Science/Dairy Technology, Fishery Science securing 55% marks in aggregate or 2.75 OGPA in 4.0 scale or 6.75 in 10 point scale following a first or high second class in B. V. Sc. & A. H./ B. Tech. (D.T.) / B. F. Sc. from any recognized University or National Institute. Candidates seeking admission to PhD course in a subject shall have passed Master's Degree in the same subject and also have done sufficient courses in the proposed major field of specialization within the subject.

In Ph.D. program of a department total no. of seats in an academic year is set on a ratio of 1:1 (Teacher eligible to guide a student : Number of students) and to a maximum of 3 seats in a department. Again, the reservation of seats is as per State Govt. rules.

IV.2.6. Intake Of Students

Academic Year 2018-2019

Courses	Level	General		SC		ST		OBC-A		OBC-B		PwD		Others		Total	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
DVP	Diploma	11	2	3	1	2	0	3	1	2	2	0	0	0	0	21	6
B.V.Sc. & AH	UG	13	3	14	4	4	0	35	0	7	1	1	0	0	0	74	8
M.V.Sc.	PG	27	7	7	1	3	0	8	0	7	1	0	0	0	0	52	9
Ph.D. in Vety. & Animal Sciences	Ph.D	7	4	1	0	0	1	1	0	0	0	0	0	0	0	9	5
Ph.D. (Life Scs.)	Ph.D	9	9	1	0	0	0	0	0	0	1	0	0	0	0	10	10
Ph.D.(Ext. Edn)	Ph.D	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
B.Tech. (DT)	UG	20	5	8	2	2	0	3	1	2	1	0	0	0	0	35	9
M.Tech. (DT)	PG	4	0	4	0	0	0	0	0	0	0	0	0	0	0	8	0
Ph.D. in Dairy Technology	Ph.D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B.F. Sc.	UG	19	5	7	3	3	0	3	1	2	1	0	0	0	0	34	10
M.F. Sc.	PG	9	3	7	1	2	0	3	2	4	1	0	0	0	0	25	7
Ph.D. in Fishery Sciences	Ph.D	3	3	2	0	0	1	0	0	0	0	0	0	0	0	5	4

IV.3. OUT-TURN OF STUDENTS

Programme	Course Name	2018	
U.G.	B.V.Sc. & A.H.	49	107
	B.F.Sc.	34	
	B.Tech. (D.T.)	24	
P.G.	M.V.Sc.	11	33
	M.F.Sc.	18	
	M.Tech.	04	
Ph.D.	Veterinary Sciences	02	06
	Fishery Sciences	04	
	Dairy Technology	00	
Total		146	

IV.4. ACADEMIC AWARDS FOR THE STUDENTS

Following recognitions are being awarded to the passed-out students of the three faculties as Gold Medals by the University :

Faculty of Veterinary & Animal Sciences

- ❖ University's Gold Medal (For securing Highest marks in B.V.Sc. & A.H.)
- ❖ Smt. Mira Mallik Gold Medal (For securing Highest marks in B.V.Sc. & A.H.)
- ❖ Prof. D.B. Mukherjee Gold Medal (For securing Highest marks in Vety. Surgery & radiology in B.V.Sc. & A.H.)
- ❖ First Batch (1953) B.V.Sc. Student Gold Medal (For securing Highest marks in 5th & 6th Semester in B.V.Sc. & A.H.)
- ❖ Dr. S.N. Roy Gold Medal (For securing Highest marks in Livestock Farm Management in B.V.Sc. & A.H.)
- ❖ Dr. B.N. Dey Memorial Endowment Gold Medal (For securing Highest marks in Vety. Gynaecology & Obstetrics in B.V.Sc. & A.H.)
- ❖ Dr. Subir Kr. Sinha Memorial Gold Medal (For securing Highest marks in Vety. Medicine, Ethics & Jurisprudence in B.V.Sc. & A.H.)
- ❖ Dr. D.K. Biswas Gold Medal (For securing Highest marks in Poultry Production Management in B.V.Sc. & A.H.)
- ❖ Dr. G.L. Sharma Endowment Gold Medal (For securing Highest marks in Vety. Public Health in B.V.Sc. & A.H.)
- ❖ Dr. B.N. Mukherjee Gold Medal (For securing Highest marks in Vety. Epidemiology & Preventive Medicine in B.V.Sc. & A.H.)

- ❖ Charu Chandra Koley Gold Medal (For securing Highest marks in Animal Genetics & Breeding in B.V.Sc. & A.H.)
- ❖ Dinesh Chandra De and Sova De Memorial Gold Medal (For securing Highest marks in 5th Composite Annual Examination in B.V.Sc. & A.H.)
- ❖ Dr. (Mrs.) Gita Biswas Gold Medal (For securing Highest marks in Vety. Parasitology in B.V.Sc. & A.H.)
- ❖ Dr. Animesh Kumar Chakraborty Gold Medal (For securing Highest marks in Vety. Pharmacology & Toxicology in B.V.Sc. & A.H.)
- ❖ Prof. G.C. Banerjee Gold Medal (For securing Highest marks in Animal Nutrition in B.V.Sc. & A.H.)
- ❖ Dr. P. Bhattacharya Gold Medal (For securing Highest OGPA in Animal Production & Management in M.V.Sc.)
- ❖ Prof. Rathindra Nath Ghosh Gold Medal (For securing Highest marks in Vety. Pharmacology & Toxicology in M.V.Sc.)
- ❖ 1972 Batch B.V.Sc. & A.H. Students Gold Medal (For securing Highest Marks in B.V.Sc & A.H.]
- ❖ Prof. K. L. Bhowmick & Prof A.K. Majumdar Memorial Gold Medal (For securing Highest Marks in Veterinary A.H. Extension Education in B. V. Sc. & A. H.)

Faculty of Dairy Technology

- ❖ University's Gold Medal (For securing Highest marks in B.Tech. (D.T.)
- ❖ Prof. Sukumar De Gold Medal (For securing Highest marks in B.Tech. (D.T.)
- ❖ Smt. Tirthamayee Ganguli Gold Medal (For securing First Position in M.Tech. (D.T.)
- ❖ Prof. N. C. Ganguli Memorial Gold Medal (For securing First Position in M.Tech. (D.C.)

Faculty of Fishery Sciences

- ❖ University's Gold Medal
(For securing Highest marks in B.F.Sc.)
- ❖ Smt. Lakshmi Das & Sri Kasi Nath Das Gold Medal
(For securing Highest marks in B.F.Sc.)
- ❖ Smt. Manju Biswas & Dr. K.P. Biswas Gold Medal
(For securing Highest marks in Fishery Engineering in B.F.Sc.)

During the academic years 2018, 26 (twenty six) passed-out students received different Gold Medals offered by the University.

List of the Gold Medal Winners for the year 2018 are as follows :

Sl. No.	Name of Medal & Course	Recipient
1	University Gold Medal B.V.Sc & A.H.	Chayna Singha Mahapatra
2	Smt. Mira Mallik Gold Medal B.V.Sc & A.H.	Chayna Singha Mahapatra
3	Prof. D. B. Mukherjee Gold Medal B.V.Sc & A.H.	Bipasha Goswami
4	Dr. S. N. Roy Gold Medal B.V.Sc & A.H.	Chayna Singha Mahapatra
5	First Batch(1953) B.V.Sc Students' Gold Medal B.V.Sc & A.H.	Chayna Singha Mahapatra
6	Dr. B. N. Dey Memorial Endowment Gold Medal B.V.Sc & A.H.	Rinzee Tamang
7	Dr. B. N. Mukherjee Gold Medal B.V.Sc & A.H.	Chayna Singha Mahapatra
8	Charu Chandra Koley Gold Medal B.V.Sc & A.H.	Chayna Singha Mahapatra
9	Dinesh Chandra De and Sova De Memorial Gold Medal B.V.Sc & A.H.	Chayna Singha Mahapatra
10	Dr. Subir Kr. Sinha Memorial Gold Medal B.V.Sc & A.H.	Ajantika Ghosh
11	Dr. D. K. Biswas Gold Medal B.V.Sc & A.H.	Chayna Singha Mahapatra
12	Dr. G. L. Sharma Endowment Gold Medal B.V.Sc & A.H.	Chayna Singha Mahapatra
13	Dr. (Mrs.) Gita Biswas Gold Medal B.V.Sc & A.H.	Chayna Singha Mahapatra

Sl. No.	Name of Medal & Course	Recipient
14	Dr. Animesh Kumar Chakraborty Gold Medal B.V.Sc & A.H.	Chayna Singha Mahapatra
15	Dr. G. C. Banerjee Gold Medal B.V.Sc & A.H.	Chayna Singha Mahapatra
16	1972 Batch B.V.Sc. & A.H. Students Gold Medal B.V.Sc & A.H.	Chayna Singha Mahapatra
17	Prof. K. L. Bhowmick & Prof A.K. Majumdar Memorial Gold Medal B.V.Sc & A.H.	Chayna Singha Mahapatra
18	Dr. P. Bhattacharya Gold Medal M.V.Sc.	No candidate
19	Dr. Rathindranath Ghosh Gold Medal, M.V.Sc.	Shabnam Akhtar
20	University Gold Medal B.F.Sc.	Krishna Pada Singha
21	Smt. Lakshmi Das & Sri Kasi Nath Das Gold Medal, B.F.Sc.	Krishna Pada Singha
22	Smt. Manju Biswas & K. P. Biswas Gold Medal, B.F.Sc.	Krishna Pada Singha
23	University Gold Medal B.Tech. (DT)	Rahul Mondal
24	Prof. Sukumar De Gold Medal B.Tech. (DT)	Rahul Mondal
25	Smt. Tirthamayee Ganguli Gold Medal M.Tech. (DT)	Debarima Ghosh
26	Prof. N. C. Ganguli Memorial Gold Medal M.Tech. (D.C.)	Alisha Chhetri

IV.5. HOSTEL

The University provides hostel facilities to the students admitted to different courses of the University. There are nine hostels, out of which six hostels are ear-marked for boys and three hostels are being used by the girl students.

IV.6. SCHOLARSHIPS

Merit Scholarships are being granted every year to the meritorious students of the University for the Undergraduate courses as per approval and guidelines issued by the State Government.

IV.7. CONVOCATION

IV.7.1. Twelveth Convocation of the University took place on 14th June, 2018 at University Headquarters, Belgachia Campus, Kolkata. His Excellency, the Governor of West Bengal and Chancellor of the University Hon'ble Sri KeshariNathTripathi inaugurated the convocation and presided over the ceremony.

A total of 17 students were awarded Ph.D degree, while 54 and 75 students received Master's and Bachelor's degree, respectively covering all the three faculties of the University.

Faculty wise following degrees were awarded to the students for the year 2018 –

<i>Degree in the Faculties</i>	<i>No. of Students</i>
Faculty of Veterinary & Animal Sciences	
B.V.Sc. & A.H.	33
M.V.Sc.	23
Ph.D.	15
Faculty of Fishery Sciences	
B.F.Sc.	25
M.F.Sc.	29
Ph. D.	02
Faculty of Dairy Technology	
B.Tech. (D.T)	17
M.Tech. (D.T)/ M.Sc.	02
Ph.D.	Nil

IV.8. EMPLOYMENT OF THE STUDENTS

University Officials as well as the Faculty members always keep in touch with the passed out students for their counseling towards employment and placement in a job. The alumni also take care of the situation for those going in for employment. Students of this University are being absorbed in different developmental sectors in the State, Country and abroad as well.

The main industrial sectors /sectors absorbing the faculty-wise out-turns of the University are as follows :-

IV.8.1. Faculty of Veterinary & Animal Sciences :

- (i) State Govt. Department of Animal Resource Development,
- (ii) Livestock and poultry sector, medicine producing Private companies,
- (iii) Broiler poultry producing Private Companies,
- (iv) Animal feed producing Private Companies,
- (v) State Govt. Administrative services,
- (vi) KVKs
- (vii) Bank and P.O. etc.

IV.8.2. Faculty of Dairy Technology :

The students passed out from the Faculty get employment in National and Multi-national milk & dairy product producers under Govt., Semi Govt. and Private Companies like,

- | | | |
|---|-------------------------|----------------------------|
| (i) Glaxo Smithkline, | (ix) Amul, | (xvi) ITC (Food Division), |
| (ii) Nestle India Ltd., | (x) Hindustan Lever, | (xvii) Almarai, Riyadh, |
| (iii) OSSOM Dairy Ltd, | (xi) Keventer Agro Ltd. | (xviii) IBM, |
| (iv) Dynamix Dairy Industries Ltd., | (xii) NDDB, | (xix) TCS, |
| (v) Mother Dairy, Kolkata, | (xiii) IDMC Ltd. | (xx) WCMPPF Ltd., |
| (vi) Metro Dairy, Kolkata, | (xiv) Kullick Dairy | (xxi) ITC Infotech, |
| (vii) National Food Corporation Ltd., Jeddah, | | (xxii) Paras Foods, etc. |
| (viii) IDPL | (xv) Vadilal Ltd. | |

IV.8.3. Faculty of Fishery Sciences

The passed out students of the faculty were placed at different Government, Non-Government organizations, Semi-Government organizations, Private Institutes, viz.,

- State Govt. Department of Fishery and other Administrative services,
- Bank & PO,
- Central Govt. Research Services,
- Teaching in different SAUs,
- Animal and fish feed producing Private Companies,
- KVKs etc.

IV.9. PLACEMENT CELL

The University has established a Placement Cell since February, 2006. This cell works towards the placement of the passed out students of the three Faculties of the University. Majority of the passed out students get employment through different Competitive examinations in the Government, Semi-Government and Private sector organizations.

IV.10. ANTI RAGGING COMMITTEE

There exists an anti-ragging committee in the University to prevent ragging in the University.

IV.11. Award of PG/Ph.D. degree to students for the year 2018:

IV.11.1. List of Ph. D. students awarded :-

A. Faculty of Veterinary & Animal Sciences

Sl. No.	Name	Regn. No.	Subject	O.G.P.A.	Year
1	RAJA L.	5375 of 2012-2013	VETERINARY PHARMACOLOGY & TOXICOLOGY	8.99	2017
2	AMIT KUMAR PANDEY	5041 of 2010-2011	VETERINARY PHARMACOLOGY & TOXICOLOGY	8.90	2017

Sl. No.	Name	Regn. No.	Subject	O.G.P.A.	Year
3	NANOTKAR RAHUL YADAORAO	5509 of 2013-2014	VETERINARY PHARMACOLOGY & TOXICOLOGY	8.98	2017
4	SOMRAJ CHATTARAJ	680 of 1996-1997	VETERINARY GYNAECOLOGY & OBSTETRICS	8.49	2017
5	SUSHMA KUMARI	5511 of 2013-2014	LIVESTOCK PRODUCTS TECHNOLOGY	8.66	2017
6	ANUPAM KHAN	1252 of 2000-2001	LIVESTOCK PRODUCTS TECHNOLOGY	8.57	2017
7	ACHINTYA MAHANTI	1895 of 2003-2004	VETERINARY MICROBIOLOGY	9.05	2017
8	V. LALZAWMLIANA	5672 of 2014-2015	VETERINARY SURGERY & RADIOLOGY	8.37	2017
9	LALCHAWIMAWIA RALTE	5048 of 2010-2011	VETERINARY PARASITOLOGY	7.88	2018
10	SHAGUFTA PERVEEN	5676 of 2014-2015	VETERINARY PHYSIOLOGY	8.73	2018
11	ARCHANA KUMARI	5673 of 2014-2015	VETERINARY SURGERY & RADIOLOGY	7.87	2018
12	DEBOJYOTI BORKOTOKY	5671 of 2014-2015	VETERINARY PATHOLOGY	9.02	2018
13	MADHURENDRA BACHAN	5378 of 2012-2013	VETERINARY PARASITOLOGY	8.52	2018
14	ANURAG JENA	5512 of 2013-2014	VETERINARY PARASITOLOGY	8.57	2018
15	SOUMITRA SINHA	5364 of 2012-2013	LIVESTOCK PRODUCTION MANAGEMENT	7.24	2018

B. Faculty of Fishery Sciences

Sl. No.	Name	Regn. No.	Subject	O.G.P.A.	Year
1	TANUSHRI GHORAI	4415 OF 2007-2008	FISH PROCESSING TECHNOLOGY	8.44	2017
2	SANJEEV KUMAR	5056 OF 2010-2011	FISHERIES RESOURCES MANAGEMENT	8.02	2017

IV.11.2. List of P.G. students awarded :-

A. Faculty of Veterinary & Animal Sciences

Sl. No.	Name	Regn. No.	Subject	O.G.P.A.	Year
1	ACHINTA MAHATO	4974 of 2010-2011	ANIMAL NUTRITION	8.37	2017
2	ANUJ KUMAR YADAV	4981 of 2010-2011	ANIMAL NUTRITION	8.09	2017
3	SUBRATA CHOWDHURY	4965 of 2010-2011	ANIMAL NUTRITION	8.36	2017
4	SANTU PAHAN	4997 of 2010-2011	LIVESTOCK PRODUCTS TECHNOLOGY	8.43	2017
5	SHABNAM AKHTAR	5842 of 2015-2016	VETERINARY PHARMACOLOGY & TOXICOLOGY	8.93	2017
6	RINKU BURAGOHAIN	5742 of 2015-2016	VETERINARY PHARMACOLOGY & TOXICOLOGY	8.14	2017
7	ARINDAM SAMANTA	4973 of 2010-2011	VETERINARY MICROBIOLOGY	8.72	2017
8	RAHUL TUDU	4998 of 2010-2011	VETERINARY BIOCHEMISTRY	8.69	2017
9	ANIRUDDHA BANERJEE	4946 of 2010-2011	VETERINARY PATHOLOGY	9.02	2017
10	SAMBHUNATH SAHA	5743 of 2015-2016	VETERINARY PATHOLOGY	8.66	2017
11	SAGUN SAREN	4996 of 2010-2011	VETERINARY ANATOMY & HISTOLOGY	8.54	2017
12	PALASH BISWAS	4989 of 2010-2011	VETERINARY ANATOMY & HISTOLOGY	8.51	2017
13	ARKAPRABHA SHEE	4952 of 2010-2011	VETERINARY ANATOMY & HISTOLOGY	8.54	2017
14	SINGH ABHISHEK DHARM SINGH	5744 of 2015-2016	VETERINARY PUBLIC HEALTH	8.38	2017
15	RAYA SARKAR	4967 of 2010-2011	VETERINARY EPIDEMIOLOGY & PREVENTIVE MEDICINE	8.80	2017
16	GEETANJALI THAPA	5012 of 2010-2011	VETERINARY MEDICINE, ETHICS & JURISPRUDENCE	8.91	2017
17	KONGCHO ONGMU LACHENPA	5741 of 2015-2016	VETERINARY MEDICINE, ETHICS & JURISPRUDENCE	8.69	2017
18	KSHOUNEE KHAN	5000 of 2010-2011	VETERINARY SURGERY & RADIOLOGY	7.99	2017
19	SAYANTAN SARKAR	4968 of 2010-2011	VETERINARY SURGERY & RADIOLOGY	8.16	2017
20	BIPASA TRIPATHY	4984 of 2010-2011	VETERINARY SURGERY & RADIOLOGY	8.83	2017

Sl. No.	Name	Regn. No.	Subject	O.G.P.A.	Year
21	SEKH YASIN	4977 of 2010-2011	VETERINARY SURGERY & RADIOLOGY	8.73	2017
22	ANKUSH BHARTI	5009 of 2010-2011	VETERINARY & A.H. EXTENSION EDUCATION	7.85	2017
23	DIPANJAN JANA	4983 of 2010-2011	LIVESTOCK PRODUCTS TECHNOLOGY	8.48	2018

B. Faculty of Fishery Sciences

Sl. No.	Name	Regn. No.	Subject	O.G.P.A.	Year
1	SRISTIMITA BAAG	5156 OF 2011-2012	AQUATIC ENVIRONMENT MANAGEMENT	7.60	2017
2	ANKIT SARKAR	5746 OF 2015-2016	AQUATIC ENVIRONMENT MANAGEMENT	7.88	2017
3	SONA B. R.	5754 OF 2015-2016	AQUATIC ENVIRONMENT MANAGEMENT	8.34	2017
4	SOUMALIKA GUHA	5153 OF 2011-2012	AQUATIC ENVIRONMENT MANAGEMENT	6.95	2017
5	SATARUPA GHOSH	5150 OF 2011-2012	AQUATIC ENVIRONMENT MANAGEMENT	8.25	2017
6	ARKYAJIT KARAN	5166 OF 2011-2012	FISHERY ECONOMICS	8.16	2017
7	SATYANARAYANA BODA	5753 OF 2015-2016	FISHERY ECONOMICS	8.36	2017
8	RUPAM THAKUR	5146 OF 2011-2012	FISHERY ECONOMICS	8.76	2017
9	AMIT KUMAR RAY MONDAL	5163 OF 2011-2012	FISHERY ECONOMICS	8.39	2017
10	PRIYANKA PATRA	5751 OF 2015-2016	FISHERY EXTENSION	8.65	2017
11	SOUMILI DAS	5154 OF 2011-2012	FISHERY EXTENSION	8.63	2017
12	PABITRA SARKAR	5142 OF 2011-2012	FISH PROCESSING TECHNOLOGY	8.17	2017
13	JYOTI SAHU	5662 OF 2014-2015	FISH PROCESSING TECHNOLOGY	8.51	2017
14	JOYITA CHAKRABORTY	5139 OF 2011-2012	FISH PROCESSING TECHNOLOGY	8.76	2017

Sl. No.	Name	Regn. No.	Subject	O.G.P.A.	Year
15	DIPANKAR CHATTERJEE	5138 OF 2011-2012	FISH PROCESSING TECHNOLOGY	8.74	2017
16	SUSHANT KARKI	5159 OF 2011-2012	FISH PROCESSING TECHNOLOGY	8.53	2017
17	SAURABH CHANDRAKAR	5660 OF 2014-2015	AQUACULTURE	8.49	2017
18	ARKA CHOWDHURY	5136 OF 2011-2012	AQUACULTURE	8.48	2017
19	RAKIB SARKAR	5167 OF 2011-2012	AQUACULTURE	8.36	2017
20	CHAUHAN YASHODHANKUMAR	5747 OF 2015-2016	AQUACULTURE	8.12	2017
21	BITHILEKHA MONDAL	5137 OF 2011-2012	AQUACULTURE	8.55	2017
22	ANWESHA ROY	5164 OF 2011-2012	AQUATIC ANIMAL HEALTH	8.55	2017
23	ANANYA GUCHHAIT	5135 OF 2011-2012	AQUATIC ANIMAL HEALTH	8.30	2017
24	OLIPRIYA BISWAS	5168 OF 2011-2012	FISHERIES ENGINEERING & TECHNOLOGY	8.93	2017
25	AMRUTHA R KRISHNAN	5745 OF 2015-2016	FISHERIES ENGINEERING & TECHNOLOGY	8.87	2017
26	RANGA RAM MOHAN	5752 OF 2015-2016	FISHERIES RESOURCE MANAGEMENT	8.05	2017
27	SHIBAM SAHA	5152 OF 2011-2012	FISHERIES RESOURCE MANAGEMENT	8.27	2017
28	MINAKSHI MARKAM	5664 OF 2014-2015	FISHERIES RESOURCE MANAGEMENT	7.84	2017
29	ABHRAJYOTI MANDAL	5134 OF 2011-2012	FISHERIES RESOURCE MANAGEMENT	7.71	2017

Faculty of Dairy Technology

Sl. No.	Name	Regn. No.	Subject	O.G.P.A.	Year
1	ALISHA CHHETRI	5169 OF 2011-2012	DAIRY CHEMISTRY	8.29	2017
2	DEBARIMA GHOSH	5181 OF 2011-2012	DAIRY TECHNOLOGY	8.11	2017

IV.11.3. List of U.G. students awarded :-

A. Faculty of Veterinary & Animal Sciences

Sl. No.	Name	Regn. No.	O.G.P.A.	Division	Year
1	SK. SAMIM REJA	5274 OF 2012-2013	7.85	FIRST DIVISION	2017
2	AJANTIKA GHOSH	5237 OF 2012-2013	8.14	FIRST DIVISION WITH DISTINCTION	2017
3	BIPASHA GOSWAMI	5283 OF 2012-2013	8.29	FIRST DIVISION WITH DISTINCTION	2017
4	PARVIN ALAM	5257 OF 2012-2013	7.91	FIRST DIVISION	2017
5	SOHAM DAS	5275 OF 2012-2013	7.89	FIRST DIVISION	2017
6	SUKANYA SARKAR	5278 OF 2012-2013	8.06	FIRST DIVISION WITH DISTINCTION	2017
7	RANAJIT KUNDU	5261 OF 2012-2013	8.27	FIRST DIVISION WITH DISTINCTION	2017
8	SHUBHANKAR MAITY	5271 OF 2012-2013	6.85	SECOND DIVISION	2017
9	IFTEKAR RAHAMAN	5248 OF 2012-2013	7.37	FIRST DIVISION	2017
10	CHAYNA SINGHA MAHAPATRA	5244 OF 2012-2013	8.55	FIRST DIVISION WITH DISTINCTION	2017
11	MD YEAZUDDIN MOLLA	5253 OF 2012-2013	7.46	FIRST DIVISION	2017
12	SARIKUL ALAM	5265 OF 2012-2013	7.56	FIRST DIVISION	2017
13	MEHEBUB ALAM MONDAL	5254 OF 2012-2013	7.39	FIRST DIVISION	2017
14	MD HABIB	5252 OF 2012-2013	6.90	SECOND DIVISION	2017
15	DALIA ROY	5245 OF 2012-2013	7.12	FIRST DIVISION	2017
16	SATINATH MONDAL	5266 OF 2012-2013	6.49	SECOND DIVISION	2017
17	SOURAV SARKAR	5277 OF 2012-2013	7.11	FIRST DIVISION	2017
18	SHUBHANKAR HALDER	5270 OF 2012-2013	6.78	SECOND DIVISION	2017
19	SUMANA GHARAMI	5279 OF 2012-2013	7.28	FIRST DIVISION	2017
20	RINZEE TAMANG	5263 OF 2012-2013	8.32	FIRST DIVISION WITH DISTINCTION	2017
21	SATYAM SINGH	5268 OF 2012-2013	7.07	FIRST DIVISION	2017
22	PARTH VERMA	5280 OF 2012-2013	7.03	FIRST DIVISION	2017

Sl. No.	Name	Regn. No.	O.G.P.A.	Division	Year
23	SHIMPI KUMARI	5284 OF 2012-2013	7.53	FIRST DIVISION	2017
24	MAHAMUDUL HASAN KHAN	5290 OF 2012-2013	7.22	FIRST DIVISION	2017
25	MOFIZUR RAHAMAN	5288 OF 2012-2013	6.86	SECOND DIVISION	2017
26	MD EMAM HOSSAIN	5286 OF 2012-2013	6.40	SECOND DIVISION	2017
27	BIPLAB DANDAPAT	5285 OF 2012-2013	7.07	FIRST DIVISION	2017
28	SUBHADIP KIRTANIA	5110 OF 2011-2012	6.46	SECOND DIVISION	2017
29	SUDHANSHU SHUKLA	5131 OF 2011-2012	7.16	FIRST DIVISION	2017
30	PARTHA SARKAR	4966 OF 2010-2011	7.25	FIRST DIVISION	2017
31	SMITA MANDAL	5289 OF 2012-2013	6.90	SECOND DIVISION	2017
32	SUJEET KUMAR	5132 OF 2011-2012	6.27	SECOND DIVISION	2017
33	NITESH KUMAR SINGH	5010 OF 2010-2011	5.90	PASS	2017

B. Faculty of Fishery Sciences

Sl. No.	Name	Regn. No.	O.G.P.A.	Year
1	RUDRADEEP MANDAL	5145 OF 2011-2012	6.52	2017
2	AVISHEK BARDHAN	5388 OF 2013-2014	8.12	2017
3	RIDDHIMAN SAHA	5397 OF 2013-2014	8.13	2017
4	SANDIP PAL	5400 OF 2013-2014	7.94	2017
5	HIMANSHU GIRI	5389 OF 2013-2014	8.03	2017
6	KUNTAL KRISHNA BERA	5393 OF 2013-2014	7.98	2017
7	MADHABENDU BERA	5394 OF 2013-2014	7.81	2017
8	RAMJANUL HAQUE	5396 OF 2013-2014	8.33	2017
9	SANJIB KHATUA	5401 OF 2013-2014	7.81	2017
10	SK. JOSIBUL HAQUE	5403 OF 2013-2014	7.96	2017
11	ARIJIT DAS	5386 OF 2013-2014	7.86	2017
12	INSAN ODUD	5390 OF 2013-2014	7.34	2017

Sl. No.	Name	Regn. No.	O.G.P.A.	Year
13	SUMAN KARMAKAR	5406 OF 2013-2014	7.93	2017
14	SOMA PAN	5404 OF 2013-2014	7.91	2017
15	KRISHNA PADA SINGHA	5392 OF 2013-2014	8.35	2017
16	NUPUR GHOSH	5430 OF 2013-2014	8.12	2017
17	SUSMITA JANA	5407 OF 2013-2014	8.08	2017
18	ANKIT TAMANG	5384 OF 2013-2014	7.50	2017
19	ASIK IKBAL	5387 OF 2013-2014	7.68	2017
20	ANIMESH MAITY	5383 OF 2013-2014	7.79	2017
21	SUSMITA MUKHERJEE	5408 OF 2013-2014	8.31	2017
22	SUBHASIS DOLUI	5405 OF 2013-2014	7.68	2017
23	PASANG DORJEE TAMANG	5395 OF 2013-2014	7.41	2017
24	TRIPARNA PAHARI	5409 OF 2013-2014	8.04	2017
25	KARTIK MONDAL	5391 OF 2013-2014	7.62	2017

C. Faculty of Dairy Technology

Sl. No.	Name	Regn. No.	O.G.P.A.	Year
1	INDRAJIT SEN	5413 OF 2013-2014	7.16	2017
2	RITAM BERA	5417 OF 2013-2014	7.66	2017
3	SATYAJIT SAMANTA	5419 OF 2013-2014	8.07	2017
4	SUDIPTA MANNA	5420 OF 2013-2014	8.16	2017
5	SURAJIT SAMANTA	5422 OF 2013-2014	7.74	2017
6	RANIT DUTTA	5416 OF 2013-2014	7.59	2017
7	SAIKAT BHATTACHARYA	5418 OF 2013-2014	7.46	2017
8	CHOWDHURY AJHARUDDIN	5412 OF 2013-2014	7.70	2017
9	KUNAL DAS	5414 OF 2013-2014	7.24	2017

Sl. No.	Name	Regn. No.	O.G.P.A.	Year
10	RAHUL MONDAL	5415 OF 2013-2014	8.28	2017
11	SAHEB DAS	5425 OF 2013-2014	7.67	2017
12	SUKANYA CHATTERJEE	5421 OF 2013-2014	7.91	2017
13	KUNAL KUNDU	5428 OF 2013-2014	7.50	2017
14	ABHISHEK LOHARA	5411 OF 2013-2014	6.68	2017
15	ABHILASH RAI	5410 OF 2013-2014	6.80	2017
16	PRAVIN KUMAR BARAI	5188 OF 2011-2012	6.30	2017
17	SURAJ KUMAR	4945 OF 2011-2012	6.17	2017

IV.12. Achievements/ recognitions of the students :

The students of WBUAFS took part in several co-curricular activities, such as sports, quiz, All India Agricultural Festival (Agriunifest), Youth Festivals etc. throughout the year. Regular activities such as, Annual Sports and Cultural meets are also organized by the University. Besides this, some other remarkable events that took place in the different campuses of the University are as follows :

IV.12.1. West Bengal State & District Student Youth Science Fair :

Students selected from WBUAFS participated in the fair during 12th to 14th September, 2018 organised at BITM and 26th to 28th September, 2018 at Netaji Indoor Stadium . The team from WBUAFS bagged the 2nd International Yoga Day was celebrated at the three faculties in the three campuses of the University on 21st June, 2018. Around 150 students participated in the programme.

IV.12.3.

18 Students alongwith a faculty member participated in **AGRIUNISPORTS** at Punjab Agricultural University during 2nd – 5th January, 2019. 22 Students alongwith a faculty member participated in **AGRI-UNIFEST** organized at Sardarkrushinagar Dantiwada Agricultural University, Sardarkrushinagar from 3rd – 7th February, 2019

IV.12.4.

A camp entitled “National Integration-2019” was attended by 16 volunteers and 1 faculty member on 6th March, 2019 at Rabindra Bharati University.

IV.12.5

Around 300 students from the three faculties under WBUAFS took part in the Central Annual Sports & Cultural Meet from 19th to 20th March, 2019. The meet was inaugurated by the Hon’ble Vice-Chancellor, WBUAFS Prof. Purnendu Biswas. Other dignitaries were also present in the inaugural session and during closing ceremony.

IV.12.6. Recognition of students' at the University Level :

Best Student of the University	: Dr. Achinta Mahato
Best Student from Faculty of Vety. & Animal Sciences	: Dr. Achinta Mahato
Best Student from Faculty of Fishery Sciences	: Nur Mohammed Mollah
Best Student from Faculty of Dairy Technology	: Sri Tamal Sarkar

Some other Highlights of the year :

1.	Institute level National Veterinary Physiology Quiz was organized in which BVSc&AH students participated in September, 2018. The best team of the University comprising two students participated in zonal level (Eastern) quiz organized at OUAT, Bhubaneswar, Odisha during October, 2018 and ranked 2 nd in the Eastern zone.
2.	A number of students from WBUAFS have qualified ICAR NET Examination, 2018. Faculty wise distribution stands as follows : F/O Veterinary & Animal Sciences : 4 ICAR/ARS (NET) Qualified F/O Dairy Technology : 2 ARS (NET), 1 Qualified for NDRI Karnal Ph.D, 1 Qualified for NDRI Karnal M.Tech, 1 student cleared CAT exam with 96% marks F/O Fishery Sciences : 9 ICAR (NET)
3.	Students of various colleges participated in Quiz Competition conducted by the West Bengal University of Animal & Fishery Sciences held at 7 th International Poultry Fair, 2019 in Kolkata
4.	Nilesh Chandravanshi, Deptt. Of Fish Processing Technology was selected for the Best Research Thesis Award in the National Conference on Resilience and Resource Management including ICT for Sustainable Agriculture and Biotechnology February 23-24, 2019 at Dr. B.R. Ambedkar University, Agra.



Final round participating student team with organizing teachers in National Veterinary Physiology Quiz



Quiz Competition conducted by WBUAFS at 7th International Poultry Fair, 2019 in Kolkata

V. RESEARCH

Academic activities in West Bengal University of Animal & Fishery Sciences are supplemented by the research activities to promote overall growth in several fields of Veterinary & Animal Husbandry, Dairy Technology and Fishery Sciences. Various research projects are being handled by the faculty members of academic departments, scientists and research workers under the supervision and guidance of the Directorate of Research, Extension & Farms.

Faculty members and scientists of the University develop new technologies for the farmers and entrepreneurs of the state through research and extension centre in various agro-climatic zones of the state. The technical knowledge achieved as an outcome of the projects is later disseminated to the livestock owners and fish farmers of the state. Continuous effort is on in the University to identify priority research areas and set up its own research strategies keeping an eye on eco-friendly, farmer friendly and small farming unit based technologies.

At present the University is conducting 25 various research projects/schemes with a fund allocation of about Rs.1184 lakhs sponsored by different funding agencies like ICAR, State Govt. departments, DBT, DST and other institutes of repute.

Two State Govt. funded RKVY Programmes has recently been concluded, which had an involvement towards livelihood development of the tribal people of Jhargram Block of West Midnapore and Extension of Animal Health Care Services in Remote Areas of West Bengal utilising Rs. 1114.58 lakhs. Two numbers of 'All India Network Project' on Mariculture and Fish Health are currently being carried out in the Fishery Faculty of the University. 'Establishment of Biotech-KISAN Hub' has recently been granted by DBT, Ministry of Science & Technology, Government of India which enacts as a feather in the cap of the University. All India Network Programme on Bluetongue Disease funded by ICAR has also completed successfully.

V.I. FACULTY-WISE DISTRIBUTION OF RESEARCH PROJECTS

Sl.No.	Faculty	No. of projects	Fund allocation
1	Veterinary and Animal Sciences	18	619.67 lakhs
2	Fishery Sciences	3	156.93 lakhs
3	DREF	4	407.37 lakhs
Total		25	1183.97 lakhs

V.2. FACULTY-WISE COMPLETED RESEARCH PROJECTS

Sl.No.	Faculty	No. of projects	Fund allocation
1	Veterinary and Animal Sciences	5	1293.58 lakhs
Total		5	1293.58 lakhs

V.3. TYPE OF ON-GOING PROJECTS AND FUNDING AGENCIES

Sl.No.	Type of Project	Funding Agency	Numbers
1	All India Coordinated Research Project (AICRP)	ICAR	1
2	All India Network Project (AINP)	ICAR	3
3	RKVY	Govt. of WB	2
4	Outreach programme	ICAR	2
5	Tribal Sub Plan (TSP)	ICAR	1
6	Ministry of Agriculture, Govt. of India (AH & DF, NBFGR-NFDB etc.)	GOI	1
7	Department of Biotechnology (DBT)	Govt. of India	8
8	Department of Science and Technology (DST)	Govt. of India	2
9	Department of Science and Technology (DST)	Govt. of WB	3
10	ICAR project	ICAR	1
11	Industry (Foreign Funded – Danisco Animal Nutrition, UK and Medical Research Council, UK)	UK	2
12	Industry	Private	2

V.4. BRIEF LISTING OF ON-GOING PROJECTS

V.4.1. FACULTY OF VETERINARY AND ANIMAL SCIENCES

Sl. No	Title of the Project	Funding Agency	Principal Investigator and Department	Fund Sanctioned (In lakhs)	Year of initiation
1	AICRP on Goat Improvement Black Bengal Field Unit-Kolkata	ICAR	Dr. M. Roy, Animal Genetics Breeding	33.85	2000
2	Evaluation of Rice- Based IFB Newgen DDGS as an alternative protein source in Commercial Broiler Chicken	IFB, India	Prof. B. Roy, Animal Nutrition	9.72	2017
3	Studies on Supplementation of Selenium Yeast on Growth Performance, Immunity and Meat Quality in Broiler Chickens.	Unique Biotech Ltd.	Prof. B. Roy, Animal Nutrition	5.96	2019
4	Comparison of two phytase form in broilers	Danisco Animal Nutrition, UK	Dr. G.P. Mandal, Animal Nutrition	6.28	2018
5	Strategic inclusion of different varieties of dietary nano-iron and nano-zinc for better health and production of designer meat	DBT, GOI	Dr. P. N. Chatterjee, Animal Nutrition	27.00	2018
6	Strategic Dietary fortification with synthesized nano-minerals for better health and Environment friendly Poultry Production	DHESTBT, Govt. of West Bengal	Dr. P. N. Chatterjee, Animal Nutrition	10.00	2018

Sl. No	Title of the Project	Funding Agency	Principal Investigator and Department	Fund Sanctioned (In lakhs)	Year of initiation
7	Molecular Characterization of indigenous ducks and study of its innate immunity particularly against avian influenza	Department of Science and Technology, SERB, Govt. of India	Dr. A. Pal, Livestock Farm Complex	4.20	2018
8	An Integrated Approach to explore and exploit the Innate and Adaptive immune response in Indigenous Duck Breeds of North Eastern and South India (A collaborative project under Duck consortium)	Department of Biotechnology, Ministry of Science and Technology, Govt. of India.	Dr. A. Pal, Livestock Farm Complex	94.92	2018
9	Network Programme on Bovine Tuberculosis Control: Mycobacterial Diseases in Animals Network (MyDAN) Programme	DBT, Govt. of India	Dr. Chanchal Guha, Veterinary Epidemiology and Preventive Medicine	109.26	2018
10	Studies on antimicrobial and anti-biofilm activities of medicinal plant extracts obtained from North Eastern India against pathogenic bacteria isolated from pigs, cattle and poultry of NER India; and cattle, poultry and ducks of West Bengal	DBT, Govt. of India	Dr. S. N. Joardar, Veterinary Microbiology	30.36	2017
11	A multi-stakeholder approach towards operationalizing antibiotic stewardship in India's pluralistic rural health system	Medical Research Council, UK	Dr. I. Samanta, Veterinary Microbiology	60.00	2019
12	Potentiality of phytobiotics to counter prevalent bacteria vis-a-vis to replace use of antibiotics in poultry diet in West Bengal	DST, Govt. of West Bengal	Dr. I. Samanta, Veterinary Microbiology	18.80	2017
13	Outreach Programme on "Monitoring of Drug Residues and Environmental Pollutants"	Outreach Programme, ICAR, New Delhi	Prof. T.K. Mandal, Veterinary Pharmacology & Toxicology	88.00	2010
14	Outreach Programme on Zoonotic Diseases (Dermatophytosis and Cryptococcosis in Animals and their Public Health Importance)	Outreach Programme, ICAR, New Delhi	Dr. Chanchal Debnath, Veterinary Public Health	5.22	2009
15	North East Silk Based Bio-engineered Vascular Conduits	Department of Biotechnology, Ministry of Science and Technology, Government of India	Prof. Samit Kumar Nandi, Veterinary Surgery & Radiology	15.70	2017

Sl. No	Title of the Project	Funding Agency	Principal Investigator and Department	Fund Sanctioned (In lakhs)	Year of initiation
16	Developing nanoformulations of crystal protein for rendering neuroprotection and cytoprotection to cornea and retina. DST Nanomission, Govt. of India	DST Nanomission.	Dr Sarbani Hazra, Veterinary Surgery & Radiology	78.40	2017
17	Developing new strategies for prevention of corneal blindness in dogs. DBT, Govt of India	DBT, GOI	Dr Sarbani Hazra, Veterinary Surgery & Radiology	35.00	2018
18	Engineering Natural inspired peptide based nano medicine for blood clotting wound healing	DBT, GOI	Prof. Samit Kumar Nandi, Veterinary Surgery & Radiology	20.85	2019

V.4.2. FACULTY OF FISHERY SCIENCES

Sl. No	Title of the Project	Funding Agency	Principal Investigator and Department	Fund Sanctioned (In lakhs)	Year of initiation
1	Development of Surveillance Programme for Aquatic Animal Diseases in West Bengal in collaboration with National Bureau of Fish Genetic Resources (NBFGR), ICAR, Lucknow, Uttar Pradesh, (National Co-ordinator)	NFDB	Dr. Gadadhar Dash, Aquatic Animal Health	76.43	2013
2	All India Network Project on Fish Health	ICAR	Dr. T. J. Abraham, Aquatic Animal Health	58.50	2015
3	Development of Seed Bank and Propagation of Cage Culture of Asian Seabass and Mullet in Coastal West Bengal (AINP on Mariculture)	ICAR	Dr. B.K. Das, Aquatic Environment Management	22.00	2015

V.4.3. DIRECTORATE OF RESEARCH, EXTENSION & FARMS

Sl. No	Title of the Project	Funding Agency	Principal Investigator and Department	Fund Sanctioned (In lakhs)	Year of initiation
1	National Information System on Agriculture Education network in India (NISAGENET)	ICAR	Dr. (Mrs.) S. Das, Scientist, DREF	3.08	2005
2	Tilapia Farming in Aquaponics System for Biocontrol of Mosquito-borne diseases and Biopurification of Water with special reference to Duckweed Control	DST, Govt. of WB	Dr. (Mrs.) S. Das, Scientist, DREF	3.26	2016
3	Livelihood Improvement of Poor and Tribal people through Livestock Based Enterprises of Selected villages of West Bengal	Tribal Sub Plan, ICAR	Dr. K.C. Dhara, Asstt. Director (Farms), DREF	264.00	2017
4	Establishment of Biotech-KISAN Hub at WBUAFS, Kolkata	DBT, Govt of India	Dr. K.C. Dhara, Asstt. Director (Farms), DREF	137.03	2018

V.5. BRIEF LISTING OF COMPLETED PROJECTS (2018-19)

V.5.1. FACULTY OF VETERINARY AND ANIMAL SCIENCES

Sl. No	Title of the Project	Funding Agency	Principal Investigator and Department	Fund Sanctioned (In lakhs)	Duration
1	Molecular characterization and study of disease resistance genes in indigenous sheep of West Bengal	DBT, Ministry of Science and Technology, Govt. of India	Dr. Aruna Pal, Livestock Farm Complex	52.00	2014-18
2	RKVY on "Livelihood improvement of poor & tribal people through livestock based enterprises under selected villages of Jhargram Block"	Dept. of ARD, Govt. of W.B	Dr. M C Pakhira, Livestock Farm Complex	678.80	2014-19
3	New dimension in Agricultural Marketing and Rural employment generation through value added duck meat products	DST, Govt. of W.B	Prof. S. Biswas, Livestock Products Technology	17.24	2015-18
4	"Extension of Animal Health Care Service in remote areas of West Bengal through Mobile Veterinary Clinic (M.V.C.)" in Eleven Blocks of Paschim Medinipur	A.R.D. Deptt., Govt. West Bengal	Dr. Partha Sarathi Jana, Veterinary Epidemiology & Preventive Medicine	435.98	2015-18

Sl. No	Title of the Project	Funding Agency	Principal Investigator and Department	Fund Sanctioned (In lakhs)	Duration
5	All India Network Programme on Bluetongue Disease	Network Project, ICAR	Dr. S. N. Joardar, Veterinary Microbiology	109.76	2001-18

V.6. SALIENT ACHIEVEMENTS OF ON-GOING PROJECTS

V.6.1. HIGHLIGHTS OF THE PROJECTS CONDUCTED IN THE FACULTY OF VETERINARY AND ANIMAL SCIENCES

I. AICRP on 'Goat improvement, Black Bengal (Field unit)'

The AICRP on Goat Improvement, Black Bengal Field Unit-Kolkata is going on since 2002 under the establishment of West Bengal University of Animal & Fishery Sciences with an objective to conserve and genetic improvement of Black Bengal Goat in the farmer's flock. In 2018-19 with the addition of a new cluster at Tarai Zone (Purba Mallick Para village) under Dhupguri Block of Jalpaiguri District, the project is now spread to five clusters covering 10 village centres i.e. Ayeshpur and Ganguria village (Nadia Cluster); Jatirampur and Rangabelia village (Sundarban Cluster); Bamunia and Beliapukur village (Murshidabad Cluster); Manapara-Malapada and Dhangri-Ranidihi village (Jhargram Cluster); Purba Mallickpara-ICDS Para and Purba Mallickpara-School Para village (Dhupguri Cluster).

Salient Achievements :

- From the four growth centres in two cluster (Ayeshpur, Doluipur, Ganguria, Rangabelia-Jatirampur) in 2012-13, the project is now spread to five clusters covering 10 village centres distributed in five different districts viz. Sundarban Delta (partially tribal based), Jhargram (mostly tribal based), Nadia (partially minority based), Murshidabad (partially Scheduled Caste based), and Dhupguri (Scheduled Caste based).
- During last five years (2014-15 to 2018-19) the population of Black Bengal Goat, the number of registered doe, and stakeholders in goat keeping under the project areas is increased about 42 % (from 2257 to 3209 goats), 93 % (from 705 to 1361 does), and 119 % (from 317 to 695 families) respectively.
- The population growth is reached to 219.47 % in 2018-19 based on available doe of initial stock.
- Consistent improvement in body weight starting from birth to adult stage is achieved during last five years by using superior bucks. There is 9.50% increase of birth weight (from 1.225 ± 0.009 kg to 1.341 ± 0.006 kg); 10.75% increase of 3 months weight (from 4.958 ± 0.053 kg to 5.491 ± 0.038 kg); 4.00% increase of 6 months weight (from 7.529 ± 0.059 kg to 7.829 ± 0.049 kg); 8.30% increase of 9 months weight (from 10.095 ± 0.079 kg to 10.932 ± 0.057 kg) and 6.50% increase of 12 months weight (from 13.003 ± 0.08 kg to 13.660 ± 0.065 kg).
- About 60.67 % milk production is enhanced (from 7.582 ± 0.010 kg to 12.182 ± 0.153 kg) in Black Bengal Goat within an average 60 days lactation period during 2018-19 from 2015-16.
- The reproductive efficiency has able to maintain in peak level like previous years. The average litter size is maintained a standard level (around 1.8) in all the years with maximum twinning (51.94 %), followed by singlet (34 %), triplet (13.28 %), and quadruplet (0.78 %).
- The average flock size of Black Bengal goat in adopted areas is reached to 6.66 from 5.94 of previous year.

- The morbidity of goats is reduced to 37.85% in 2018-19 from 58.30% of 2014-15 although the prevalence of different causes of morbidity is similar.
- The mortality rate is further reduced to 5.50% in 2018-19 as compared to 7.45% in 2014 -15.
- Sale of goat has been increased to 22.80% during 2018-19 keeping the population growth of 219.47%.
- The average annual income of farmer from goat rearing has increased about 75% by last five years (from Rs 4820.00 to Rs 8421.00) with 11.33% more income from a doe (from Rs 2790.00 to Rs 3106.00).
- Some breedable does as well as feeder, water bottle and torch light have been distributed to 75 tribal farmers.
- Technologies related to goat keeping have been transferred to the adopted farmers through different capacity building programmes.
- Goat exhibition and competition in all adopted clusters with suitable prize has been organized to promote maintaining superior germ plasm.
- 3 nos. Research paper, 4 nos. Leaflet, a Package of Practices (for rearing of Black Bengal goats under field condition), and a Breed Monograph has been published during 2018-19.
- Linkages with Government bodies, KVK and NGO's are maintaining for overall development of Bengal Goat farmers.



Fig. 5.1 : Different Activities under the project

Leaflet: Three nos. of leaflet has been published during 2018-19 covering general management practices and preventive measures of goat rearing for distribution to community goat keepers and wide circulation in different districts.

Package of practices : A Package of Practices for rearing of Black Bengal goats under field condition (in Bengali) was published during current year.

Breed Monograph : A Breed Monograph of Black Bengal goat has also been published during 2018-19.



Fig. 5.2 : Booklet, Leaflet and Monograph printed under the project

2. New dimension in Agricultural Marketing and Rural employment generation through value added duck meat products

Observation & findings of the Project :

1. 50 nos of women duck raisers were identified and given hands on training at two places, Mohanpur University campus, Nadia and Nimpith KVK, south 24 pgs with exposures visit to duck rearing farms.
2. Consumers market survey were conducted on the acceptability of duck meat and duck meat products in different places of Nadia, South 24 pgs, North 24 pgs and Murshidabad Districts among 240 consumers (60 from each District)
3. Results were statistically analyzed with different socio-economic parameters.
4. Further refinements of products preparation were also taken up for complete standardization of each product namely Duck Meat Ball, Duck meat Nuggets and Duck Meat Pickles.
5. Some trials were conducted for product preparations where combination of culled chicken meat and culled duck meat were combined to judge the different product quality character including sensory acceptability.



i) Carcasses ready for further processing



ii) Minced meat

Fig. 5.3 : Processing of Duck Meat

3. RKVY Project on Extension of Animal Health Care Services in Remote Areas of West Bengal through Mobile Veterinary Clinic (MVC)

Under the recently completed project '*RKVY on MVC at Paschim Medinipur*', animal health care facilities could be extended among the poor farmers residing at the stipulated 11 blocks of Paschim Medinipur district fruitfully. Vaccination against commonly occurring diseases in livestock and poultry could be done extensively with the help of DD, ARD & PO, Paschim Medinipur and concerned BLDOs in the remotest parts of the blocks under the project. Spot diagnosis and treatment of livestock and poultry could be done in the assigned area of the project. Awareness programmes regarding scientific rearing of livestock and poultry were also successfully organized in the project area.

4. All India Network Programme on 'Bluetongue disease'

In this recently concluded network research project some of the remarkable achievements are summarized below:

- Sero-Epidemiological investigation on bluetongue (BT) disease was successfully carried out for the first time in eastern (Bihar, Jharkhand, Odisha) and north-eastern (Sikkim, Assam, Meghalaya, Nagaland, Manipur, Mizoram, Tripura) states of India and seroprevalence of BT was reported.
- Bluetongue virus (BTV) was isolated for the first time from any eastern and north eastern states of India. BTV was isolated from sheep, goat and *Culicoides* midges (vector of BTV) during the study period. The serotypes isolated were BTV-15, BTV-16, BTV-21.
- Presence of competent vector of BTV (*Culicoides* spp.), susceptible host and circulating virus (BTV) was confirmed indicating eastern and north-eastern states of India are vulnerable to bluetongue disease.
- Different *Culicoides* species, collected from various states, were identified for the first time. Major species of midges were *Culicoides oxytoma*, *C. schultzei*, *C. actoni*, *C. innoxious*, *C. peregrines*, *C. inornatithorax*, *C. clavipalpis*.
- As a part of vector biology study, bionomics of probable vector species and laboratory based observations of life history were carried out for *Culicoides innoxius*, *C. peregrinus* and *C. oxystoma*.
- Dip-stick ELISA based diagnostic tool developed for detection of anti-BTV antibodies.

5. Studies on antimicrobial and anti-biofilm activities of medicinal plant extracts obtained from North Eastern India against pathogenic bacteria isolated from pigs, cattle and poultry of NE India; and cattle, poultry and ducks of West Bengal

Important observations during 2018-19 are as follows :

- For the first time strong and moderate biofilm producing *E. coli* and *Salmonella* isolates were detected (mostly in poultry and ducks)
- Enterohemorrhagic *E. coli* (EHEC O157 serotype) was detected in duck in West Bengal
- AmpC* gene was detected as most prevalent antimicrobial resistance genes among the studied ESBL and *AmpC* genes in *E. coli* and *Salmonella* isolates followed by CTX-M in cattle and poultry in West Bengal
- A positive correlation between biofilm associated gene (*csgA*) and antimicrobial resistance gene (*bla_{AmpC}*) was observed in *E. coli* isolated from cattle and poultry in West Bengal

6. A multi-stakeholder approach towards operationalizing antibiotic stewardship in India's pluralistic rural health system

A multi institutional project initiated by Dr Indranil Samanta, Assistant Professor under the advisory of Prof P. Biswas, Hon'ble Vice Chancellor, WBUAFS with London School of Hygiene and Tropical Medicine, Royal Veterinary College (RVC), Institute of Development Studies, UK; Liver Foundation and Centre for Public Health and Development, India regarding value chain analysis of antibiotic usage in human and animals. A project start-up meeting was conducted in Kolkata and field visit to the study villages were arranged during the month of February, 2019.

7. Potentiality of phytobiotics to counter prevalent bacteria vis-a-vis to replace use of antibiotics in poultry diet in West Bengal

In poultry industry antibiotics are used in diet in sub-therapeutic level to prevent illness or promote growth which may select for antimicrobial resistance in the commensal bacteria present in the gut. An urgent need

to develop an alternative approach for the poultry farmers was felt because the antibiotic resistant bacteria are emerging as a potent health threat in the community. In the proposed project attempt will be taken to develop a phytobiotic which can act against the common pathogenic bacteria of poultry. Further study will be done whether addition of the phytobiotic in diet of experimental poultry could maintain the normal growth performance and whether it has any effect on intestinal microbial population.

Salient achievements:

- Occurrence of *E. coli* was higher in poultry than pigs in studied samples collected from West Bengal
- AmpC gene was detected as most prevalent antimicrobial resistance genes among the studied ESBL and AmpC genes in *E. coli* and *Salmonella* isolates followed by CTX-M in poultry in West Bengal

8. Outreach Programme on Zoonotic Diseases (Dermatophytosis and Cryptococcosis in Animals and their Public Health Importance).

The collaborating centre in West Bengal is working on “*Dermatophytosis and Cryptococcosis in animals and their public health importance*”. Salient achievements of the project at this centre is as follows :

1. In the epidemiology of dermatophytosis, asymptomatic cats were found to be a potent source of infection to in-contact human being.
2. The antifungal properties of Propylene glycol and magnesium chloride were evaluated and were found effective against the clinical isolates of dermatophytes.
3. The sensitivity of conventional methods (cultural isolation and identification) for the diagnosis of *Microsporiumcanis* and *Trichophyton rubrum* was detected to be more than 90% in comparison to PCR diagnosis by using species specific primers.

V.6.2. HIGHLIGHTS OF THE PROJECTS CONDUCTED IN THE FACULTY OF FISHERY SCIENCES

1. Surveillance of Freshwater Fish and Shellfish Diseases in West Bengal (NSPAAD)

Achievements of the project during 2018-19 :

- Surveillance of 17 different cultured food fish and 3 cultured shrimp/prawn species (economically important) and 10 different freshwater ornamental fish species.
- Documented the prevalence of OIE listed disease (WSV) and diseases of National concern such as Myxoboliasis, Argulosis, Thelohanelliosis, Trichodiniasis, Dactylogyrosis, Ichthyophthiriasis, Aeromoniasis and Vibriosis in West Bengal.
- Three different types of vertebral deformities such as lordosis, scoliosis and fish opercula deformity syndrome (FODS)
- Total 34 nos. of diseases had been identified among them, bacterial 08, parasitic 15, viral 01, fungal 01, Nutritional disorders 06, Stress mediated diseases 03.
- 4 districts (5 blocks each) fully covered under active surveillance.
- 6 districts (approx.10 blocks) covered under passive surveillance.
- 10 nos of gene sequence (16S rRNA /18S rRNA) submitted to NCBI GenBank.
- Total 34 nos of awareness programmes were conducted
- Total 24 nos of trainings (Officer's and farmer's level) were made.
- Total 10 nos of research papers were published in various journals of National and International repute under NSPAAD programme.

- 07 nos of leaflets and 08 nos of training manuals were published in regional languages.
- 04 nos of PG students successfully completed their thesis work under NSPAAD programme
- A total of 58 Farmers training programmes and Awareness Camps have been completed, benefitting 6000 numbers of fish/Shrimp farmers and 58 Fishery Extension Officers.
- Submitted 443 nos of baseline data out of which (216 nos active and 227 nos passive), 532 nos of biological information sheets and 03 nos of disease outbreaks information and 174 nos of Hatchery information sheets to the NSPAAD website for development of **National Database**. These information includes both fish and shellfish.
- Farm Advisory services through Whatsapp, messages, e-mail, TV programmes and over telephone to the farmers/hatchery personnel's/NGOS/Private entrepreneurs through which a strong rapport has been developed among the fish/shrimp farming community and also with the Government machinery.
- **The common diseases identified in the field during the project tenure :**



Scoliosis



Ulcer



White Spot Disease



Argulosis



Fish Operculum Deformity Syndrome (FODS)



Tumour

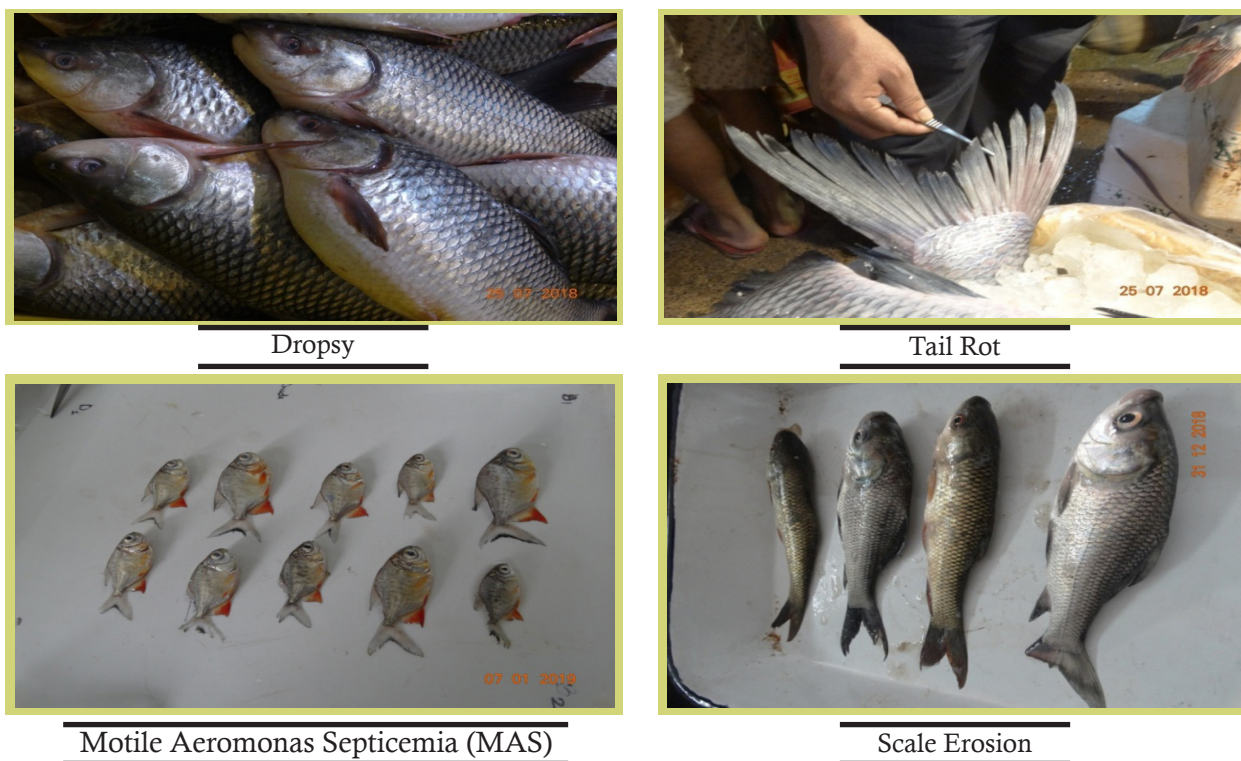


Fig. 5.4 : Fish Diseases identified in the fields

2. All India Network Project on Fish Health

Achievements of the project during 2018-19 :

- The effect of oral oxytetracycline (OTC)-therapy against β -haemolytic *Aeromonas hydrophila* and α -haemolytic *A. caviae* by two challenge routes, wound healing and histopathological alterations in the kidney of Nile tilapia *Oreochromis niloticus* juveniles were evaluated. The degree of wound healing was faster initially in OTC treated tilapia.
- The safety of OTC-dosing in *O. niloticus* at the approved dose and dosage of 80 mg/kg biomass/day for 10 consecutive days and compared with control.
- In OTC fed fish muscle, the residues peaked on day 10 OTC-dosing (161.40 ng/g) and decreased thereafter. Traces of residues were detected even after 42 days of cessation of OTC-dosing
- The residue levels accomplished the permissible limit of European Commission on day 6 post-OTC dosing.
- Mild histopathological lesions were observed in the kidney.
- A significant dose-dependent reduction in fish biomass (5.84-8.16%) during the dosing and post-OTC dosing periods was observed.
- The serum biomarkers like serum glucose, aspartate aminotransferase, alanine aminotransferase, creatinine and C-reactive protein of Nile tilapia increased significantly on day 10 OTC-dosing. Their levels subsequently reduced and became normal on day 25-42 post-OTC-dosing at the approved dose and dosage.

- The results demonstrated that the oral OTC-dosing influences the physiological state of apparently healthy Nile tilapia in a dose-dependent manner.
- The dietary influences of an antiparasitic drug emamectin benzoate (EB) administered to Nile tilapia *Oreochromis niloticus* at 0, 50 and 500 µg/kg biomass/day, i.e., control, 1X, and 10X the recommended dose of 50 µg EB/kg biomass/day (X) for 7 consecutive days were examined.

3. All India Network Project on Mariculture

The Faculty of Fishery Sciences of West Bengal University of Animal and Fishery Sciences, Chakgaria has successfully implemented an “All India Network Project on Mariculture” funded by ICAR-Central Marine Fisheries Research Institute, Cochin at Digha in the existing Experimental Prawn Hatchery Complex of the Department of Fisheries, Govt. of West Bengal with active co-operation of the Department of Fisheries, Govt. of West Bengal.

Salient achievements of the project during 2018-19 :

- A new site was selected for cage culture operations at **NimtalaGhat**, which is situated at **Kakdwip**, South 24 Parganas- 743347. The name of the estuary is **Kalnagini**, which is directly connected with **Bay of Bengal**. Three sites were selected for seed collections namely **NimtalaGhat**, **Jelepara&BanshtalaGhat**, which all are located at Kakdwip, South 24 Parganas- 743347.
- A new battery of four Rectangular Cages (inner dimension 16.5 ft. × 10 ft. each) with Plank for Walkways (3 ft. wide) were fabricated for installation in Kalnagini River at NimtalaGhat.

V.6.3. HIGHLIGHTS OF THE PROJECT CONDUCTED IN THE DIRECTORATE OF RESEARCH, EXTENSION & FARMS

1. National Information System in Agricultural Education Network of India (NISAGENET)

The National Information System on Agricultural Education Network in India (NISAGENET) portal is under continuous monitoring at the Central Server of IASRI, New Delhi under the supervision of NISAGENET team, IASRI. The main objective of this project is to generate different types of reports on agricultural education in India. The nodes are provided with unified information system for collection, compilation and modification of data which are later analysed and compiled at the Central unit to portray about the activities of the agricultural education system in India. The portal provides a wide spectrum of information relevant to the SAUs and Deemed universities under ICAR.

NISAGENET Cell was established at West Bengal University of Animal and Fishery Sciences in January, 2005 to update and upload information about the University on the NISAGENET portal server.

The NISAGENET system as a whole works on collection, compilation and analysis of information about the activities of the agricultural education system in India. It provides all the information as desired by National Statistical Commission (NSC-2001) from the data available at Central Server. The statistical data is also being provided to Ministry of HRD from IASRI, New Delhi, as per requirement from time to time.

2. Tilapia Farming in Aquaponics System for Biocontrol of Mosquito-borne diseases and Biopurification of Water with special reference to Duckweed Control

An aquaponics unit has been established at Mohanpur campus. In this unit, 3 types of mechanisms have been adopted. The aquaponics system, i.e. cultivation of vegetables without soil is being established where the water containing fish excreta is pumped to the vegetable-cultivating containers. Three types of systems are developed. One is floating raft-system, second is vegetable cultivation in pipes through which the water

rich in fish excreta is passed and the third one is the containers/plastic tubs with gravels where vegetables are grown and the water containing fish excreta is supplied to the containers and recycled to the fish cultivating FRP tanks after de-nitrification by the plants. Tilapia fish have been used in the project. Vegetables like cauliflower, cabbage, brinjal, paddy-plant, corn plant, tomato, etc. were cultivated. It is totally an organic system of culture where, ammonia-rich fish excreta is used as the manure for the crops. This system is also a water-saving culture system where same water is recycled for fish cultivation.



Fig. 5.5 : Project site and participants of aquaponics training

As a part of the project, 26 farmers of North 24 pgs district were trained in a two day long training programme, where along with theoretical classes, participants were also trained in practical session at the project site.

3. Livelihood Improvement of Poor and Tribal people through Livestock Based Enterprises of Selected villages of West Bengal

Livelihood Improvement of Poor and Tribal people through Livestock Based Enterprises of Selected villages of West Bengal under TSP is one of the flagship extension activities of ICAR implemented in West



Fig. 5.6 : Farmer's Training

Bengal under West Bengal University of Animal and Fisher Sciences. Various extension activities including training Health care and providing best quality of **Black Bengal Goat, Gongroo Pig, Garole Sheep and Banraja poultry** along with inputs like feed, mineral mixture, vaccination etc. are being distributed to the needy farmers belonging to Schedule Tribes in six cluster area (six districts) of West Bengal for improvement of livelihood of these farmers. Extensive training (both Institute level and Village level) mainly for women farmers of different clusters viz Habra-I & II North 24 Parganas, Illambazar, Birbhum, Lodhasuli, Jhargram, Bandowan, Purulia, Purbasthali-I, East

Burdwan and Bali, Gosaba, South 24 Parganas have been carried out under the project.

4. Establishment of Biotech-KISAN Hub at West Bengal University of Animal and Fisheries Sciences, Kolkata

The project entitled Establishment of Biotech Kisan Hub at West Bengal University of Animal & Fishery Sciences has started since April, 2018 after receiving sanction from the Department of Bio Technology, Ministry of Science & Technology, Government of India. The Project started with the objective for linking available Science & Technology to the farmers of Sundarban area through understanding their problems and to provide a suitable alternative solution for their better livelihood. Aim of Biotech-KISAN Hub

Programme is to provide available Science & Technology to the farmers of Sundarban, West Bengal area after studying and understanding their problems. This will provide a suitable alternative solution for their better livelihood. Since inception a total of 531 women farmers have been trained along with fellowship of an amount of Rs 1000/- per head including a book on Sheep and goat rearing, Mineral mixture, vaccine, medicine etc. Side by side 69 scientists are being trained with modern technologies related to sheep and goat husbandry. An Elite Germplasm centre has been established with 288 Black Bengal Goat and 112 Garole sheep of good quality. At present, 57 Black Bengal Goat kid and 28 Garole Sheep kid have been produced of the parent stock and about 50 of them (20 male & 30 female) are ready for distribution. Some glimpses of success have been reflected based on the interest of the trained women farmers along with trained scientists which have been creating a close linkage. Establishment of HUB for farmers' knowledge through ICT was made with one complete ICT laboratory, one mobile App in the name of "MUUK" and Website in the name of Biotech Kisan (<http://btkisanwbuaafs.com/>) to provide solution to the farmers about their problems related to animal husbandry. The impact of capacity building programme has been assessed and found a tremendous impact on the farmers on adoption of scientific method of Sheep and Goat rearing practices as their alternative livelihood but quantifiable economic progress has not yet been achieved in this area as it is time consuming but enthusiasm among women farmers has been reflected.



Fig 5.7 : Modern sheep and goat house at germplasm centre



Fig 5.8 : Sheep and goat grazing at germplasm centre

VI. EXTENSION & OUTREACH ACTIVITIES

The aim of Extension activity in WBUAFS is to ensure enhancement in productivity from the animal and fishery sectors through generation of employment and in turn increment of income. Such extension activities also help in gathering feed-back from the beneficiaries. These feedbacks help in the design of future research and education activities, such as setting up farmers' need based training modules. In WBUAFS, outreach activities are basically farmers' enrichment programme by the scientists and extension educationists, along with the support and initiative from the Government and non-government organisations. So farmers' or their representative's participation is a must in such extension activities. The extension system is designed keeping in mind socio-economically weak farming community, which is larger in size. It is always being tried to extend helping hands towards the farmers with either small or no landholdings thus demanding for lesser infrastructural requirement for their development.

VI.I. EXTENSION EDUCATION

Directorate of Research, Extension & Farms manages planning and execution of all the extension activities of the University in close consultation and co-operation of the faculty members through the Deans of the faculties. It also plays an important role in collaborating and coordinating the research findings and outreach programmes with the State Govt. Department of Animal Resource Development, Fishery Development and other Govt. and Non-Govt. organizations. The Directorate also organizes different types of seminars, symposium, training programmes, workshops and refresher courses etc. at regular intervals. Another important extension activity is publication of periodicals, farm journals, newsletters, research highlights, leaflet, booklets etc. to create awareness amongst the farmers on latest technological advancements in the fields of Veterinary, Dairy and Fishery Sciences. The department is also responsible for arranging awareness camps, production of documentary films, participation in technology demonstration fairs and exhibitions, radio and TV shows etc. at frequent intervals. It also coordinates several programs with the aim to disseminate knowledge evolved through technologies developed in the University to the rural mass. The Directorate also provides guidance and supervises the activities of the different KVKs under its control. Moreover, it monitors the extension of knowledge and information about the activities of the University through media, be it either in print or electronic form or through web.

VI.II. CONFERENCE/WORKSHOP/SYMPOSIUM/SEMINAR/ TRAINING PROGRAMMES ORGANISED BY DIFFERENT DEPARTMENTS OF WBUAFS :

West Bengal University of Animal & Fishery Sciences						
Sl. No	Title	Program Type	Organizing Dept.	Venue	Date/ Duration	Participants
1.	Quiz Competition conducted by the WBUAFS held at 7 th International Poultry Fair, 2019 in Kolkata	Quiz	WBUAFS	International Poultry Fair, 2019	2019	Students of various colleges

Faculty of Veterinary & Animal Sciences						
Sl. No	Title	Program Type	Organizing Dept.	Venue	Date/ Duration	Participants
1.	International Symposium on 'Technological Innovations in Muscle Food Processing for Nutritional Security, Quality and Safety' & 8th Conference of IMSACON-VIII	International Symposium	Livestock Products Technology	WBUAFS, Kolkata	22 nd -24 th November, 2018, 3 Days	Faculty Members, Research Scholars, students etc. from India and abroad
2.	19 th Indian Veterinary Congress & XXVI Annual Conference of IAAVR and National Symposium on 'Innovative Progress in Animal Health and Production for Safe and Secured Food under One Health Perspective'	Conference	Veterinary Biochemistry	WBUAFS Kolkata	1 st -2 nd February, 2019 2 Days	Faculty Members, Research Scholars, students etc.
3.	Institute level National Veterinary Physiology Quiz	Quiz	Veterinary Physiology	WBUAFS Kolkata	September, 2018	BVSc&AH students

Faculty of Fishery Sciences						
Sl. No	Title	Program Type	Organizing Dept.	Venue	Date/ Duration	Participants
1.	Fish Diseases and Their Advanced Treatment Measures	Training	Dept. of Aquatic Animal Health	Faculty of Fishery Sciences, WBUAFS, Chakgaria campus	18 th -20 th September, 2018. 3 Days	Fish Farmers
2.	Advanced health management of fish and shrimp	Training	Dept. of Aquatic Animal Health	Faculty of Fishery Sciences, WBUAFS, Chakgaria campus	26 th -28 th March, 2019. 3 Days	Fish Farmers

Sl. No	Title	Program Type	Organizing Dept.	Venue	Date/ Duration	Participants
3.	ISEE National Seminar-2018 “Integrated Farming System for Enhancing Farmers’ Income and Nutritional Security”	National Seminar	Dept. of Fishery Extension	WBUAFS, Kolkata	5 th – 7 th December, 2018 3 Days	Faculty Members, Research Scholars, Students etc.

Faculty of Dairy Technology						
Sl. No	Title	Program Type	Organizing Dept.	Venue	Date/ Duration	Participants
1.	Industry Oriented Research in Dairy Processing: An update and Future Strategies	Seminar	Faculty of Dairy Technology	Faculty of Dairy Technology, WBUAFS, Mohanpur, Nadia	22 nd February, 2019 1 Day	Faculty Members, Students, Entrepreneurs

Directorate of Research, Extension & Farms						
Sl. No	Title	Program Type	Organizing Dept.	Venue	Date/ Duration	Participants
1	Aquaponics	Training	DREF, WBUAFS	Mohanpur, WBUAFS	4 th – 5 th April, 2018 2 Days	Fish and ornamental fish farmers
2	Skill Development Programme to train the Trainer for Aquaculture Worker, Fish Retailer, Inland Capture fisherman cum Primary Processor, Marine Capture Fisherman cum Primary Processor & Shrimp Farmer sponsored by ASCI	Training	DREF, WBUAFS	Farmers’ Hostel, DREF WBUAFS, Kolkata	16 th – 25 th May, 2018 10 days	ASCI Trainers

Sl. No	Title	Program Type	Organizing Dept.	Venue	Date/ Duration	Participants
3	200 hours Skill Upgradation of Aquaculture Technician funded by NFDB	Training	DREF, WBUAFS	WBUAFS, Kolkata	18 th June – 16 th July, 2018 200 hours	Fish Farmers
4	Techniques of postmortem examination, diagnosis and management of diseases in poultry	Refresher training Course	DREF, WBUAFS	Farmers' Hostel, DREF WBUAFS, Kolkata	3 rd – 5 th September, 2018 3 days	Students, Faculty Members and Veterinary professionals
5	Doubling Farmers' Income through Animal Husbandry & Fishery Enterprise	Training	DREF, WBUAFS	Farmers' Hostel, DREF WBUAFS, Kolkata	9 th – 11 th October, 2018 3 days	PCs, SMS of all disciplines and other technical staff from three KVKs
6	Refresher and Hands on Training Course on 'Advanced Diagnostics Imaging in Veterinary Practices'	Refresher Course	DREF, WBUAFS	Farmers' Hostel, DREF WBUAFS, Kolkata	10 th – 15 th December, 2018 6 days	Field Veterinarians, Veterinary Officers etc.
7	Societal Development through Animal Husbandry and Allied Sectors: Role of KVK	Training	DREF, WBUAFS	Farmers' Hostel, DREF WBUAFS, Kolkata	28 th – 30 th January, 2019 3 days	PCs, SMS of all disciplines and other technical staff from three KVKs
8	200 hours Skill Development Programme on Fishery Extension Associate funded by NFDB	Training	DREF, WBUAFS	Farmers' Hostel, DREF WBUAFS, Kolkata	25 th February -16 th March, 2019 200 hours	Farmers from Fisheries' Sector

Sl. No	Title	Program Type	Organizing Dept.	Venue	Date/ Duration	Participants
9	200 hours ASCI Skill Development Programme on Aquaculture Worker funded by ICAR ATARI Kolkata	Training	DREF, WBUAFS	Farmers' Hostel, DREF WBUAFS, Kolkata	25 th February -16 th March, 2019 200 hours	Farmers from Fisheries' Sector
10	200 hours ASCI Skill Development Programme on Dairy Farmer Entrepreneur funded by ICAR ATARI Kolkata	Training	DREF, WBUAFS	Farmers' Hostel, DREF WBUAFS, Kolkata	18 th – 30 th March, 2019 200 hours	Dairy Farmers
11	Scientific rearing practices of Garole Sheep and Black Bengal Goat	Training	Project : Bio-Tech Kisan Hub DREF, WBUAFS	Farmers' Hostel, DREF WBUAFS, Kolkata	2018-19 (7 Training Programmes)	Farmers' Training – 328 beneficiaries were from project coverage area
12	Scientist & Farmers' Interaction	Meeting	Project : Bio-Tech Kisan Hub DREF, WBUAFS	Farmers' Hostel, DREF WBUAFS, Kolkata	14 th November, 2018 1 day	Scientist and Farmers (project beneficiaries)
13	Two Review Meetings of all the PCs, SMS of all disciplines and other technical staff from three KVKs under WBUAFS	Review Meetings	DREF, WBUAFS	Farmers' Hostel, DREF WBUAFS, Kolkata	12 th October 2018 and 28 th January, 2019	PCs, SMS of all disciplines and other technical staff from three KVKs

Photographs of different programs of WBUAFS organized by the different Faculties, DREF and KVK



Fig : 6.1 Extension Activities (a) Fish Festival (b) Farmers' Scientists' Interaction



Fig : 6.2 Farmers' Training Programs : (a) Village level (b) Institute Level



Fig : 6.3 NFDB Training Programs : (a) Training Lecture (b) Field Visit



Fig : 6.4 Visit of training participants to Fishery Faculty



Fig : 6.5 Different Activities of KVK

VI.3. CONSULTANCY CELL AND ADVISORY SERVICES

The Extension wing of the Directorate of Research, Extension and Farms provides Consultancy and Farm Advisory services to the practitioners in the fields of livestock farming, dairy product processing and fish farming. Faculty members and officials/scientists of the University render their expertise through field visits, farm or home visits, face-to-face discussions, over telephone, e-mails and postal communications. During 2018-2019, several livestock owners and farmers were rendered technical advises through this Directorate. The Extension wing also provides consultancy on animal husbandry, dairy technology and fishery related laboratory and field services. Livestock owners approach the cell to provide assistance for preparation of projects/schemes etc. designed for establishment of livestock, dairy and fishery farming units as well as other food products processing units of animal origin. Such schemes help them to receive financial assistance from the funding agencies. Additionally, need based self-financing training programmes are conducted when sufficient number of farmers turn-up in requirement of such programmes. Extension literature, books, booklets etc. are provided to the beneficiaries in turn of nominal prices under such Advisory and Consultancy services.

VI.4. DOCUMENTARY FILMS

Documentary Video films have been produced by WBUAFS both in vernacular as well as in English language. Farming and Animal Husbandry related documentaries produced so far are available for sale through the Extension wing of the Directorate of Research, Extension & Farms.

VI.5. ORGANIZATION OF ANIMAL / FISH HEALTH CAMPS

The West Bengal University of Animal & Fishery Sciences is continuously working towards livelihood development of the rural poor people of the State. Directorate of Research, Extension and Farms always looks forward to provide extension services on behalf of the University to the farming community residing at remote villages, where conventional aid/systems are yet not available. Some of the teaching departments of the Veterinary and Animal Sciences faculty alongwith the Extension wing of the Directorate of Research, Extension and Farms including the Krishi Vigyan Kendras under WBUAFS regularly organize treatment camps or vaccination camps free of cost against major livestock diseases at different corners of the State. During the reporting period, a total of nearly 18 animal health camps have been organized throughout the State.

In the similar fashion, the faculty of Fishery Sciences also organizes fish health camps and extends advisory services free of cost to the practicing fishermen/fisherwomen inhabiting at different remote areas of the State.

VI.6. WOMEN EMPOWERMENT

It is a good practice in the Indian households that the majority of the activities of livestock rearing are carried out by the women folk of the farmer families. The same is also true for indigenous dairy product preparation and fishery operations. The State is involved in the activities of boosting up the social as well as financial status of rural women. Since its inception, the University is also involved in improvement of the womenfolk through the overall development of their socio-economic status. The University organizes awareness camps, skill development training programmes, sensitization camps, capacity building programmes etc. for the self-help groups regularly for the improvement of the condition of farming women. The Krishi Vigyan

Kendras at Murshidabad, North 24 Parganas and Jalpaiguri districts under the aegis of WBUAFS, also organize specific women empowerment programmes frequently throughout the year.

VI.7. PUBLICATIONS

The publication of newsletters, extension literature like leaflets, booklets, pamphlets, handouts etc. are published regularly by the Extension wing of Directorate of Research, Extension & Farms. It also monitors publication of research papers and scientific popular articles in different print, electronic and web media as released by the faculty members, scientists and officials of the University. Various reports on research findings, practical class manuals, training programme compendiums are also being prepared by the departments of the faculties under the active supervision of the Directorate of Research, Extension and Farms. The extension literatures are circulated amongst the stakeholders through the Extension wing of the Directorate.

Books / booklets published by the Extension wing of the Directorate of Research, Extension & Farms in Bengali are also available for sale at a nominal rate. These booklets are very helpful for the farmers as a first hand information in the related fields.

VI.7.1. Publication Of Academic, Scientific And Extension Literatures (2018-19) :

1.	WBUAFS Newsletter	1
2.	University Annual Report	1
3.	Farm Journal	2
4.	Research Project Annual Reports	3
5.	Status Report of KVKs under WBUAFS	3
6.	Course Practical Manuals	12
7.	Laboratory Manuals	3
8.	Text Books and other Books	12
9.	Extension Book/Booklets/Pamphlets(Bengali)	9
10.	Manual for trainees	1
11.	Folder English/Bengali	1
12.	Compendium of Training Programmes	5

VI.8. OTHER EXTENSION ACTIVITIES UNDERTAKEN

Sl. No.	Job Undertaken	Faculty / Dept
1.	Routine Biochemical and Hematological Tests from clinical samples are done regularly on payment basis.	Dept. of Vety. Bio-Chemistry, F/O VAS

VI.9. ACTIVITIES OF KRISHI VIGYAN KENDRAS

The Krishi Vigyan Kendras (KVK) are front-line extension centres, meant for extension activities in agriculture and allied sectors, financed by ICAR. They actually form a network of pioneering science based institution, primarily working to exert an influence on the extension system of the district, caters to the training needs of the farmers and extension functionaries. It also facilitates the expansion of technologies tailored to the needs of farming community. It works on the principle of “Teaching by Learning” and “Learning by Doing” methods.

At present there are three KVKs under West Bengal University of Animal & Fishery Sciences functioning in the districts of Jalpaiguri, Murshidabad and North 24 Parganas. A glimpse of information about these KVKs for 2016-18 are as under :

Sl.No.	Information on	KVK Jalpaiguri	KVK Murshidabad	KVK North 24 Parganas
1.	Funding	ICAR ATARI Kolkata, Zone - V		
2.	SAC Meeting Dates	12 th February, 2019	22 nd January, 2019	25 th February, 2019
3.	Several Programs and Days Celebrated	1. Vaccination Camp 2. Mahila Kisan Diwas 3. Swachh Bharat Mission -Campaign on Swachhta-Hi-Seva 4. 'Sankalp Se Siddhi' Programme 5. Aranya Saptaha 6. World Environment Day 7. World Soil Day 8. DAESI Program 9. World water Day 10. Trainings 11. Training cum Exposure Visit Program 12. Technology Week	1. Swachh Bharat Programme 2. Mahila Kisan Diwas 3. 'Sankalp Se Siddhi' Programme 4. Technology Week 5. World Soil Day 6. DAESI Program 7. Trainings 8. Training cum Exposure Visit Program	1. Swachh Bharat Programme 2. Mahila Kisan Diwas 3. 'Sankalp Se Siddhi' Programme 4. Technology Week 5. World Soil Day 6. DAESI Program 7. Trainings 8. Training cum Exposure Visit Program

Brief report of the activities of these KVKs are as here under :

VI.9.1. KRISHI VIGYAN KENDRA, JALPAIGURI

1. Technical Achievements Details of target and achievement of mandatory activities by KVK during 2018-19

OFT				FLD			
Number of OFTs		Number of farmers		Number of FLDs		Number of farmers	
Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
10	09	85	68	24	21	366	306

Training				Seed production (q)		Planting material (Nos.)	
Number of Courses		Number of Participants		Target	Achievement	Target	Achievement
Target	Achievement	Target	Achievement				
160	127	4250	4535	30	28.5	100000	89300

2. Award received by Farmers from the KVK district (2018-19)

Sl. No.	Name of the Award	Name of the Farmer	Year	Conferring Authority	Amount	Purpose
1	Recognition	Sri Sudhanshu Mondal	2019	West Bengal University of Animal & Fishery Sciences, Kolkata	Certificate & Memento	Contribution in the diversified cultivation, Protected Cultivation & Farm Mechanization
2	Udyan Ratna	Sri Dhruva Roy	2019	Govt. of West Bengal Jalpaiguri In MATI UTSAB	Rs. 25,000/- with Certificate & Memento	Adoption & Dissemination of new technology specially Resource Conservation, Zero Tillage Technique, Crop Diversity, Goat Farming
3	Krishak Ratna	Sri Progoti Prakash Barman	2019	Govt. of West Bengal Malbazar i Block	Rs. 10,000/- with Certificate & Memento	Adoption & Dissemination of new technology under Fish Farming
4	Krishak Ratna	Sri Sahidul Islam	2019	Govt. of West Bengal Malbazar Block	Rs. 10,000.00 with Certificate & Memento	Contribution in the diversified cultivation, Exotic & High Value Vegetables
5	Recognition	Smt. Sushama Roy	2019	Doordarshan Kishan Channel, Jalpaiguri	Certificate & Memento	Adoption & Dissemination of new technology and Scientific Goat Management

VI.9.2. KRISHI VIGYAN KENDRA, MURSHIDABAD

OFT											
No. of technologies tested:											
Number of OFTs			Number of farmers								
Target	Achievement	Target	Achievement								
			SC		ST		Others		Total		
			M	F	M	F	M	F	M	F	T
10	9	92	13	2	5	2	61	17	79	21	100

FLD											
No. of technologies demonstrated:											
Number of FLDs		Number of farmers									
Target	Achievement	Target	Achievement								
			SC		ST		Others		Total		
			M	F	M	F	M	F	M	F	T
21	20	415	149	23	19	9	167	21	335	53	388

Training											
Number of Courses		Number of Participants									
Target	Achievement	Target	Achievement								
			SC		ST		Others		Total		
			M	F	M	F	M	F	M	F	T
205	214	4340	613	232	135	51	2301	358	3049	641	3690

Extension activities											
Number of activities		Number of participants									
Target	Achievement	Target	Achievement								
			SC		ST		Others		Total		
			M	F	M	F	M	F	M	F	T
3523	4130	15050	9058	1280	3079	1017	16792	4859	9058	1280	36085

Impact of capacity building											
Number of Participants trained		Number of Trainees got employment (self/ wage/ entrepreneur/ engaged as skilled manpower)									
Target	Achievement	SC		ST		Others		Total			
		M	F	M	F	M	F	M	F	T	
450	600	5	0	1	0	132	3	138	3	141	

Impact of Extension activities										
Number of Participants attended		Number of participants got employment (self/ wage/ entrepreneur/ engaged as skilled manpower)								
Target	Achievement	SC		ST		Others		Total		
		M	F	M	F	M	F	M	F	T
15050	36085	16	2	1	0	55	9	72	11	83

Seed Production (q)		Planting Material (Nos.)	
Target (crop/fish/animal)	Achievement	Target	Achievement
Paddy (10)	9.63q	Lime seedlings (500)	23100
Elephant Foot yams (15)	17q	Mango seedlings (1000)	8080
Maize as fodder (35)	42 q	Chilli seedlings (7000)	31000
Turmeric (2)	2q	Tomato seedlings (12000)	30000
Mustard (1)	0.5	Brinjal seedlings (5000)	26000
Oats as fodder (45)	52q	Cabbage(10000)	15000
Ground Nut (5)	5q	Cauliflower(7000)	13500
		Pomegranate	700
Total	128.13 q	Total	147380

Livestock strains and fish fingerlings produced (in lakh)*		Soil sample tested	
Target	Achievement	Target	Achievement
Poultry (1000 nos.)	726 nos.	Soil Sample Analyze(360 nos.)	346 nos.
Duck (500 nos.)	209 nos.		
Quail (500 nos.)	173 nos.		
Fish fingerling production (IMC fish seed) (70 lakh)	5350000 nos.		
Ornamental fishes	2000 nos.		
Vietnam koi fry production (2 lakh)	1000 nos.		
Total	5354108 nos.	Total	346 nos.

Details of soil samples analyzed so far:

Number of soil samples analyzed			No. of Farmers	No. of Villages	Amount realized (in Rs.)
Through mini soil testing kit/labs	Through soil testing laboratory	Total			
346	-	346	346	16	Nil

Performance Of Infrastructure In KVK

Sl. No.	Name of demo Unit	Year of estb.	Area (ha/sq.mt)	Details of production			Amount (Rs.)		Remarks
				Variety/breed	Produce	Qty. (No)	Cost of inputs	Gross income	
1.	Duck Unit	2011-2012	42	Khaki Campbell	Live duckling	209	-	8675	
2.	Poultry	2011-2012	53	RIR + Vanaraja	Live chicks	726	-	19420	
3.	Quail	Using Poultry Unit	53	Japanese Quail	Live birds	173	-	1311	
4.	Carp hatchery	Since establishment of KVK	0.065	IMC and other exotic carps	Fingerlings	5350000	-	25600	Rest of fish seed stock in our KVK pond
Total			0.065/148			5351108	-	55006	-

Performance of Instructional Farm (Crops)

Name Of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Type of Produce	Qty. (q)	Cost of inputs	Gross income	
Elephant foot yam	22.4.18	27.12.18	0.26	Kavur	Seed	15q	-	-	Standing crop
Kharif paddy	02.08.18	18.12.18	0.26	GS-3	Seed	9.63q	10200.00	11556.00	
Oats as fodder	20.11.18	03.2.18	0.17	Kent	Fodder	52q	2200.00	4000.00	
Turmeric	12.06.18	-	0.12	PCT-11	Seed	-		-	Standing crop

Performance of instructional farm (livestock and fisheries production)

Sl. No.	Name of the animal / bird / aquatics	Details of production			Amount (Rs.)		Remarks
		Breed	Type of Produce	Qty.	Cost of inputs	Gross income	
1.	IMC and other exotic carps	Indian Major Carps and Exotic carps	Fingerlings	5350000 nos.	-	25600.00	Rest of fish seed stock in our KVK pond
2.	Vietnam Koi	<i>Anabas cobojus</i> (Native to Vietnam)	Spawn	1000 nos.	-	-	Fish seed stock in our KVK pond for brooder production

Status of revolving fund (Rs. in lakh) for last three years

Year	Opening balance as on 1 st April	Income during the year	Expenditure during the year	Net balance in hand as on 1 st April of each year (Kind + cash)
2016-17	1275645	1954961	1714445	1516161
2017-18	1516161	569142	107347	1977956
2018-19	1977956	1731431	1320740	2388647

VI.9.3. KRISHI VIGYAN KENDRA, NORTH 24 PARGANAS

Since its inception in July, 2005, the North 24 Parganas Krishi Vigyan Kendra, Ashokenagar is committed to the identification and satisfaction of the technological needs of the farming community of this district. This KVK is functioning under the ICAR-Agricultural Technology Application Research Institute, Kolkata, Zone – V, Salt Lake, Kolkata by utilizing the fund from Indian Council of Agricultural Research under the supervision of the Directorate of Research, Extension and Farms, West Bengal University of Animal and Fishery Sciences, Kolkata. The activities of this KVK mainly centre on its aim and objectives keeping the mandates in view. This KVK is working in the fields of research, extension and development (RE&D) in agriculture and allied sectors like animal husbandry, fishery and women empowerment. The newly established office of this KVK at its present location is currently catering to the training needs of the farmers ultimately leading to the remarkable progress in the rural agrarian economy.

Details of village adoption programme:

Name of the villages adopted by PC and SMS (2018-19) for its development and action plan

Name of village	Block	Action taken for development
Sabdalpur	Habra-II	Training on different crop, Awareness programme, and demonstration programme has been conducted.
Amdanga	Amdanga	
Sonakenia	Habra-I	
Beri	Gaighata	
Chakjhawdanga	Gaighata	
Goaldah	Swarupnagar	

Priority thrust areas

Sl. No	Thrust area
1.	Integration of good agronomic practices
2.	Improvement of livestock through proper feed management and prevention of disease
3.	Improved plant protection technologies
4.	Aqua farming through scientific management
5.	Empowerment of rural women through income generation

TECHNICAL ACHIEVEMENTS

Details of target and achievement of mandatory activities by KVK during the year

OFT											
No. of technologies tested:											
Number of OFTs		Number of farmers									
Target	Achievement	Target	Achievement								
			SC		ST		Others		Total		
			M	F	M	F	M	F	M	F	T
11	8 completed and 3 in progress)	78	21	7	10	5	32	3	63	15	78

FLD											
No. of technologies demonstrated:											
Number of FLDs			Number of farmers								
Target	Achievement	Target	Achievement								
			SC		ST		Others		Total		
			M	F	M	F	M	F	M	F	T
19	19	715	75	155	30	70	310	75	415	300	715

Training											
Number of Courses			Number of Participants								
Target	Achievement	Target	Achievement								
			SC		ST		Others		Total		
			M	F	M	F	M	F	M	F	T
112	87	3360	1536	615	17	7	430	185	1983	807	2790

Extension activities											
Number of activities			Number of participants								
Target	Achievement	Target	Achievement								
			SC		ST		Others		Total		
			M	F	M	F	M	F	M	F	T
489	439	2200	641	315	199	195	1535	864	2375	1374	3749

Different Activities	Target	Achievement
Seed production (q)	50.00q	38.99q
Planting material (in Lakh)	22500	25000
Livestock strains and fish fingerlings produced (in lakh)*	2.5 lakh	3.13lakh
Soil, water, plant, manures samples tested (in lakh)	0.0025	0.0025

Details of training programmes for Rural Youth :

Thematic Area*	Title	Quarter/ month/ year	Course(s)/ Number	Duration (days)	Grand Total						
					SC		ST		OTH		Total
HORTICULTURE					M	W	M	W	M	W	
Mushroom cultivation	Mushroom production techniques	3 rd quarter, Sept., 2018	1	5 days	8	3	3	1	11	4	30
Post harvest processing	Preservation, processing of horticultural produce	3 rd quarter, Dec. 2018	1	5 days	8	3	3	1	11	4	30
TOTAL			2	10	16	6	6	2	22	8	60
FISHERY											
Ornamental fish breeding	Hands on training for ornamental fish breeding	2 nd quarter, July	1	3	5	0	5	0	15	5	30
TOTAL			1	3	5	0	5	0	15	5	30
ANIMAL SCIENCE											
Goat management	Economic importance of Black Bengal goat and its production management	2 nd quarter (Dec.)	1	10	10	5	1	0	12	2	30
TOTAL			1	10	10	5	1	0	12	2	30
TOTAL (Vocational)			4	23	31	11	12	2	49	15	120

Extension Activities

Nature of Extension Activity	No. of activities	Farmers				Total		
		M	F	T	SC/ST (% of total)	Male	Female	Total
Field Day	21	378	252	630	29	378	252	630
KisanMela	3	312	208	520	25	312	208	520
Film Show	4	168	112	280	24	168	112	280
Method Demonstrations	2	120	80	200	15	120	80	200
Farmers Seminar	2	120	80	200	15	120	80	200
Group meetings	5	90	60	150	19	90	60	150
Lectures delivered as resource persons	16	10	6	16		10	6	16
Advisory Services	120	95	25	120	22	95	25	120
Scientific visit to farmers field	105	55	50	105	48	55	50	105
Farmers visit to KVK	124	524	116	640	46	524	116	640
Diagnostic visits	10	6	4	10		6	4	10
Exposure visits	4	90	70	160	21	90	70	160
Ex-trainees Sammelan	1	85	65	150	23	85	65	150
Soil health Camp	2	90	60	150	28	90	60	150
Animal Health Camp	12	55	35	90	35	55	35	90
Farm Science Club Conveners meet	2	32	28	60	15	32	28	60
Celebration of important days (specify)	3	75	25	100	27	75	25	100
Sankalp Se Siddhi		0	0	0		0	0	0
Swatchta Hi Sewa	2	70	60	130	15	70	60	130
MahilaKisan Divas	1	0	38	38	26	0	38	38
Total	439	2375	1374	3749	433	2375	1374	3749

Other Extension activities

Nature of Extension Activity	No. of activities
Newspaper coverage	15
Radio talks	6
TV talks	8
Extension Literature	5500

VI.10. TRANSFERABLE TECHNOLOGIES DEVELOPED

Certain useful technologies have been generated / evolved through various research programmes undertaken by the three faculties and the Directorate of Research, Extension & Farms of the University. The technologies developed during the studies are lying ready for distribution to the grass root level. The developed and tested technologies might be of immense help to the State farmers for enhancement of their livelihood and income. These technologies may also be applied to the other regions of the country after going through proper refinement, thus in turn benefiting the vast farming community of the country. The technologies developed during the research works carried out in 2018-19 are as follows :

1. Development of Value added duck Meat products by Department of Livestock Product Technology, Faculty of Veterinary & Animal Sciences during 2018-19. Technology has been communicated to journal for publication.
2. Staining of some haemoprotozoa and Platyhelminthes by herbal Dyes under the guidance of Prof. S.C. Mandal, Prof. S. Batabyal, Dr. S. Baidya, Dr. R. Jas and Dr. S. Pandit in the Department of Veterinary Parasitology, Faculty of Veterinary & Animal Sciences under the curricular research work(PhD programme)2018-19. Technology is at present lying in the laboratory.
3. Determination of proximate composition of Boreli fish and its shelf life under frozen storage
4. studied by Dept. of Fish Processing Technology, Faculty of Fishery Sciences, WBUAFS during 2018-2019. The proximate composition of the fish established its nutritional importance as food fish and the frozen storage study helped in determining the possibility of marketing the fish in frozen condition over long distances.
5. Use of Zinc nano-particles in enhancing the shelf life of surimi prepared from tilapia developed by Dept. of Fish Processing Technology, Faculty of Fishery Sciences, WBUAFS during 2018-2019. Zinc nano-particles can be used as an antimicrobial agent to enhance the shelf life of surimi prepared from Tilapia and fortify it to tackle zinc deficiency.

VII. PUBLICATION ON RESEARCH FINDINGS

VII.1. RESEARCH PUBLICATIONS OF FACULTY OF VETERINARY & ANIMAL SCIENCES

VII.1.1. Department of Animal Genetics and Breeding

Sl. No.	Scientific Research Publication in Journals
1.	Das AK, Kumar S, Rahim, A and Kokate LS (2019): Genetic analysis of body weights in a selected line of Rhode Island Red grower chicken. Indian Journal of Animal Sciences 89 (3), 310-313. NAAS rating : 6.28

VII.1.2. Department of Animal Nutrition

Sl. No.	Scientific Research Publication in Journals
1.	Kumar, P., A.K. Patra , G.P. Mandal, B.C. Debnath, 2018. Carcass characteristics, chemical and fatty acid composition, and oxidative stability of meat from broiler chickens supplemented with black cumin (<i>Nigella sativa</i>) seeds. <i>Journal of Animal Physiology and Animal Nutrition</i> , DOI: 10.1111/jpn.12880. NAAS>7.5
2.	Hausmann, J., C. Deiner, A.K. Patra, I. Immig, A. Starke, and J.R. Aschenbach, 2018. Effects of a combination of plant bioactive lipid compounds and biotin compared with monensin on body condition, energy metabolism and milk performance in transition dairy cows. <i>PLoS One</i> , 13(3), e0193685. NAAS>8.5
3.	Mina, V., M. Dehghan-banadaky, K. Rezayazdi, A. Nejati-Javaremi, H. Mirzaei Alamouti, and A.K. Patra , 2018. Short communication: Effects of diets containing supplemental fats on ruminal fermentation and milk odd- and branched-chain fatty acids in dairy cows. <i>Journal of Dairy Science</i> , 101: 6133-6141. NAAS>8.5
4.	Yanza, Y.R., M. Szumacher-Strabel, M. Bryszak, M. Gao, P. Kolodziejski, A. Stochmal, S. Slusarczyk, A.K. Patra, and A. Cieslak, 2018. <i>Coleus amboinicus</i> (Lour.) leaves as a modulator of ruminal methanogenesis and biohydrogenation <i>in vitro</i> . <i>Journal of Animal Science</i> , 96: 4868-4881. NAAS>7.5
5.	Leip, A., S. Ledgard, A. Uwizeye, J. Palhares, F. Aller, B. Amon, C.M.d.S. Cordovil, D. Hongmin, A. Fusi, J. Helin, S. Hörtenhuber, A.N Hristov, R. Koelsch, C. Liu, C. Masso, N.V. Nkongolo, A.K Patra, M.R. Redding, M.C. Rufino, R.Sakrabani, G. Thoma, F. Vertès, and Y. Wang, 2019. The value of manure - manure as co-product in life cycle assessment. <i>Journal of Environmental Management</i> , 241: 293-304. NAAS>10
6.	Alagawany, M., M.R. Farag, K. Dhama, and A.K. Patra, 2018. Nutritional significance and health benefits of designer eggs. <i>World's Poultry Science Journal</i> , 74:317-330. NAAS>7.2
7.	Abd El-Hack, M.E., M. Alagawany, M. Arif, M. Emam, M. Saeed, M.A. Arain, F.A. Siyal, A. Patra, S.S. Elnesr, and R.U. Khan, 2018. The uses of microbial phytase as a feed additive in poultry nutrition—a review. <i>Annals of Animal Science</i> , https://doi.org/10.2478/aoas-2018-0009 . NAAS>7
8.	Patra, A.K., and J.R. Aschenbach, 2018. Ureases in the gastrointestinal tracts of ruminant and monogastric animals and their implication in urea-N/ammonia metabolism. <i>Journal of Advanced Research</i> , 13:39-50, https://doi.org/10.1016/j.jare.2018.02.005 . NAAS>10

Sl. No.	Scientific Research Publication in Journals
9.	Alagawany, M., M.E. Abd El-Hack, M.R. Farag, M.M. Shaheen, M.A. Abdel-Latif, A.E. Noreldin, and A.K. Patra, 2018. The usefulness of oregano and its derivatives in poultry nutrition. <i>World's Poultry Science Journal</i> , https://doi.org/10.1017/S0043933918000454 NAAS>7.2
10.	Patra, A.K., S. Amasheh, and J.R. Aschenbach, 2018. Modulation of gastrointestinal barrier and nutrient transport function in farm animals by natural plant bioactive compounds - a comprehensive review. <i>Critical Reviews in Food Science and Nutrition</i> , https://doi.org/10.1080/10408398.2018.1486284 NAAS>12
11.	Aschenbach, J.R., Q. Zebeli, A.K. Patra, G. Greco, S. Amasheh, and G.B. Penner, 2018. SYMPOSIUM REVIEW: The importance of the ruminal epithelial barrier for a healthy and productive cow. <i>Journal of Dairy Science</i> https://doi.org/10.3168/jds.2018-15243 . NAAS>8.5
12.	Patra, A.K., 2018. Interactions of plant bioactives with nutrient transport systems in gut of livestock. <i>Indian Journal of Animal Health</i> , 57:125-136. NAAS<3.5
13.	Pal, A., Pal, A. Jr., Mallick, A.I., Biswas, P. and Chatterjee, P.N. 2018. Molecular characterization of Bu-1 and TLR2 gene in Haringhata Black chicken. <i>Genomics</i> , https://doi.org/10.1016/j.ygeno.2019.03.010 NAAS 9.16

VII.I.3. Department of Livestock Farm Complex

Sl. No.	Scientific Research Publication in Journals
1.	Aruna Pal, Abantika Pal, Samiddha Banerjee, S. Batobyal and P.N. Chatterjee. 2019. Mutation in Cytochrome B gene causes debility and adverse effects on health of sheep. <i>Mitochondrion</i> https://doi.org/10.1016/j.mito.2018.10.003 . Volume 46, Pages 393-404. I.F. 9.2
2.	Pal, A. and Banerjee, S. 2018. Mitochondrial replacement therapy-a new remedy for defects in reproduction. <i>Indian Journal of Animal Sciences</i> 88 (6): 637-644. IF:6.28
3	Pradhan, M., Pal, A., Samanta, A.K., Banerjee, S., Samanta, R. 2018. Mutations in cytochrome B gene effects female reproduction of Ghungroo pig. <i>Theriogenology</i> . 119: 121-130. IF: 8.14
4	Pal, A, Pal, A. Jr., Mallick, A.I., Biswas, P. And Chatterjee, P.N. 2019. Molecular characterization of Bu-1 and TLR2 gene in Haringhata Black chicken. <i>Genomics</i> . https://doi.org/10.1016/j.ygeno.2019.03.010 IF: 8.91

VII.I.4. Department of Veterinary Anatomy & Histology

Sl. No.	Scientific Research Publication in Journals
1.	Ranjan R and Das P (2018): Histochemical studies on gastro-intestinal tract of Rabbit. <i>Int. J. Agr. Sci</i> (2018): 10.13: 6510-6513. IF:2.75
2.	Panigrahi K, Behera K, Mohapatra LM, Mandal AK, Shethy K, Panda S, Gupta S K and Behera D (2018): Age and sex biometrical studies in Vanaraja chickens. <i>Ind. J. Anim. Res</i> : 51(7): 990-994. NAAS:6.16

VII.I.5. Department of Veterinary Biochemistry

Sl. No.	Scientific Research Publication in Journals
1.	Pal, A., Pal, A., Banerjee, S., Batabyal, S., Chatterjee, P.N. (2019). Mutation in Cytochrome B gene causes debility and adverse effects on health of sheep. <i>Mitochondrion</i> ; 46, 393-404. Impact Factor: 3.226
2.	Bhattacharya. R., Das, P., Joardar, S.N., Biswas, B.K., Batabyal, S., Das, P.K., Nandi, S. K. (2019). Novel decellularized animal conchal cartilage graft for application in human patient. <i>J Tissue Eng Regen Med.</i> ; 13(1):46-57. Impact factor: 4.089
3.	Mahanti, A., Ghosh, P., Samanta, I., Joardar, S. N., Bandyopadhyay, S., Bhattacharyya, D., Banerjee, J., Batabyal, S., Sar, T.K., Dutta, T.K. (2018). Prevalence of CTX-M-Producing Klebsiella spp. in Broiler, Kuroiler, and Indigenous Poultry in West Bengal State, India. <i>Microb Drug Resist.</i> ; 24(3):299-306. NAAS Rating: 8.34

VII.I.6. Department of Veterinary Clinical Complex

Sl. No.	Scientific Research Publication in Journals
1.	Lalzawmliana V, Anand A, Mukherjee P, Chaudhuri S, Kundu B, Nandi S K, and Narsinh L Thakur N L. (2018): Marine organisms as a source of natural matrix for bone tissue engineering. <i>Ceramics International</i> . 45 (2A): 1469-1481. NAAS rating : 9.06

VII.I.7. Department of Veterinary Epidemiology & Preventive Medicine

Sl. No.	Scientific Research Publication in Journals
1.	Debbarma, A., Pandit, S., Jas, R., Baidya, S., Mandal, S. C., Jana, P. S. and Das, M. (2018). Prevalence of tick-borne haemoparasitic diseases in cattle of West Bengal, India. <i>Biological Rhythm Research</i> , DOI:10.1080/09291016.2018.1528693, Impact Factor- 0.57

VII.I.8. Department of Veterinary Gynaecology & Obstetrics

Sl. No.	Scientific Research Publication in Journals
1.	Somraj Chattaraj, Siddhartha Basu, Kalyani Ray, and Dhiman S. Pal (2019) Vitamin D As an important constituent of epididymal luminal micro-environment for maturation of spermatozoa in Large White Yorkshire boar. <i>Veterinarski Arhiv</i> 89(2) :169-182. NAAS rating : 6.29
2.	Patra M K, Hajra D K, Das R K, Sarkar P, and Deka B C. (2018): Effect of season on growth and reproduction performance of improved backyard poultry in North Eastern Hill Region. <i>Indian J. Anim. Res.</i> , 52 (7) 2018: 1071-1076. NAAS rating : 6.2

VII.I.9. Department of Veterinary Microbiology

Sl. No.	Scientific Research Publication in Journals
1.	Mahanti A, Ghosh P, Samanta I, Joardar SN, Bandyopadhyay S, Bhattacharyya D, Banerjee J, Batabyal S, Sar TK and Dutta TK (2018). Prevalence of CTX-M –producing Klebsiella spp. in broiler, kuroiler and indigeous poultry in West Bengal, India. <i>Microbial Drug Resistance</i> 24 (3): 299-306. DOI: 10.1089/mdr.2016.0096 Impact Factor (ISI)-2.344. NAAS Rating : 8.53

Sl. No.	Scientific Research Publication in Journals
2.	Samanta A, Mahanti A, Chatterjee S, Joardar SN, Bandyopadhyay S, Sar T, Mandal GP, Dutta TK and Samanta I (2018). Pig farm environment as a source of beta lactamase or AmpC producing <i>Klebsiella pneumoniae</i> and <i>Escherichia coli</i> . <i>Annals of Microbiology</i> . https://doi.org/10.1007/s13213-018-1387-2 . Impact Factor (ISI)-1.667. NAAS Rating: 7.12
3.	Bhattacharyya R, Das P, Joardar SN, Biswas BK, Batabyal S, Das PK and Nandi SK (2018). Novel decellularized chondral cartilage graft for application in human patient. <i>Journal of Tissue Engineering and Regenerative Medicine</i> . DOI: 10.1002/term.2767. Impact Factor (ISI)-4.089. [NAAS rating: 10 (anticipated)]
4.	Das P, Singh YP, Joardar SN, Biswas B, Bhattacharya R, Nandi SK and Mandal BB (2019). Decellularized chondral cartilage toward repair and regeneration of damaged cartilage. <i>ACS Applied Biomaterials</i> . DOI: 10.1021/acsabm.9b00078. (NAAS rating: > 6, anticipated)
5.	Mahanti A, Ghosh P, Samanta I, Joardar SN, Bandyopadhyay S, Bhattacharyya D, Banerjee J, Batabyal S, Sar TK and Dutta TK (2018). Prevalence of CTX-M-Producing <i>Klebsiella</i> spp. in Broiler, Kuroiler, and Indigenous Poultry in West Bengal State, India. <i>Microbial Drug Resistance</i> , 24(3): 299-306. NAAS Rating: 8.34
6.	Ghosh P, Mahanti A, Samanta I, Joardar SN, Batabyal K, Dey S, Taraphder S and Isore DP (2018). Occurrence of extended-spectrum cephalosporinase producing <i>Escherichia coli</i> in kuroiler birds. <i>Veterinarski Arhiv</i> , 87 (6): 745-757. NAAS Rating: 6.29
7.	Chowdhury S, Mandal GP, Patra AK, Kumar P, Samanta I, Pradhan S and Samanta AK (2018). Different essential oils in diets of broiler chickens: 2. Gut microbes and morphology, immune response, and some blood profile and antioxidant enzymes. <i>Animal Feed Science and Technology</i> , 236: 39-47. NAAS Rating: 8.14
8.	Sar TK, Samanta I, Mahanti A, Akhtar S, Dash JR (2018). Potential of a polyherbal drug to prevent antimicrobial resistance in bacteria to antibiotics. <i>Scientific Reports</i> 8 (1): 10899. NAAS Rating: 10.12
9.	Samanta A, Mahanti A, Chatterjee S, Joardar SN, Bandyopadhyay S, Sar TK, Mandal GP, Dutta TK and Samanta I (2018). Pig farm environment as a source of beta-lactamase or AmpC-producing <i>Klebsiella pneumoniae</i> and <i>Escherichia coli</i> . <i>Annals of Microbiology</i> 68(11): 781-791. NAAS Rating: 7.41
10.	Buragohaina R, Sar TK, Samanta I, Biswas U and Mandal TK (2019). Disposition of ceftizoxime in Staphylococcal mastitis in Indian crossbred cows. <i>The Veterinary Journal</i> , 245: 12-14. NAAS Rating: 7.77
11.	Banerjee A, Batabyal K, Debnath C, Joardar SN, Isore DP, Dey S, Taraphder S, Singh AD, Pal S and Samanta I (2019). Antifungal resistance in <i>Candida</i> possessing <i>Cryptococcus neoformans</i> isolated from domestic and feral pigeons in West Bengal, India. <i>Indian Journal of Animal Research</i> (doi: 10.18805/ijar.B-3739). NAAS Rating: 6.20
12.	Banerjee A, Bardhan R, Chowdhury M, Joardar SN, Isore DP, Batabyal, K, Dey S, Sar TK, Bandyopadhyay S, Dutta TK and Samanta I (2019). Characterization of beta-lactamase and biofilm producing <i>Enterobacteriaceae</i> isolated from organized and backyard farm ducks. <i>Letters in applied microbiology</i> (in press) (NAAS Score: 7.47)

VII.1.10. Department of Veterinary Parasitology

Sl. No.	Scientific Research Publication in Journals
1.	Nandi A., Sagar S.V., Chigure G., Fular A., Sharma A.K., Nagar G., Kumar S., Saravanan B.C., Ghosh S. 2018. Determination and validation of discriminating concentration of ivermectin against <i>Rhipicephalus microplus</i> . <i>Veterinary Parasitology</i> , 250: 30-34. Impact Factor: 2.422. NAAS Rating: 8.42
2.	Apurba Debbarma, Soumitra Pandit, Ruma Jas, Surajit Baidya, Subhash Chandra Mandal, Partha Sarathi Jana & Mamoni Das. 2018. Prevalence of tick-borne haemoparasitic diseases in cattle of West Bengal, India. <i>Biological Rhythm Research</i> , DOI: 10.1080/09291016.2018.1528693. NAAS Rating: 6.62
3.	Datta, S., Dandapat, P. and Jas, R. 2018. Diagnosis of mixed gastrointestinal nematode infection in goat by an indirect-ELISA. <i>Iranian Journal of Veterinary Research</i> , 19(3):189 – 193. NAAS Rating: 6.17

VII.1.11. Department of Veterinary Pathology

Sl. No.	Scientific Research Publication in Journals
1.	Banerjee A, Pradhan S, Debnath C, Patra N C. , Hansda R N, Mondal S , Kumar R and Singh A D (2018): Comparative pathogenicity analysis of <i>Cryptococcus neoformans</i> RAPD types, <i>Indian J. Ani. Sci.</i> B-3637: 1-4. NAAS rating: 6.28

VII.1.12. Department of Veterinary Pharmacology & Toxicology

Sl. No.	Scientific Research Publication in Journals
1.	Buragohain R, Sar TK, Samanta I, Biswas U, Mandal TK. Disposition of ceftizoxime in <i>Staphylococcal mastitis</i> in Indian crossbred cows. <i>The Veterinary Journal</i> . 2019;245:12-14. NAAS rating: 7.77
2.	Sar TK, Samanta I, Mahanti A, Akhtar S, Dash JR. Potential of a polyherbal drug to prevent antimicrobial resistance in bacteria to antibiotics. <i>Scientific Reports</i> . 2018;8(1):10899. NAAS rating: 10.12

VII.1.13. Department of Veterinary Physiology

Sl. No.	Scientific Research Publication in Journals
1.	Perveen S, Das P K, Ghosh P R, Banerjee D, Mukherjee J, Naskar S and Mondal M (2018): Alterations in haemato-biochemical profile and blood metabolites during different periods of prepubertal growth in black Bengal goat (<i>Capra hircus</i>): Effect of sex and season. <i>Biological Rhythm Research</i> . DOI: 10.1080/09291016.2018.1478687. NAAS rating: 6.70
2	Bhattacharya R., Das P., Joardar S. N., Biswas B. K., Batabyal S., Das P. K. and Nandi S. K. (2019): Novel decellularized animal conchal cartilage graft for application in human patient, <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 13:46–57. DOI: 10.1002/term.2767 Impact Factor(IF): 4.089
3	Perveen S, Das P K, Ghosh P R, Banerjee D and Mukherjee J (2019): Alterations in plasma sodium (Na), potassium (K), calcium (Ca) and iron (Fe) during different days of pre-pubertal male and female black Bengal kids, <i>Biological Rhythm Research</i> , DOI: 10.1080/09291016.2019.1594125 NAAS rating: 6.70

VII.1.14. Department of Veterinary Public Health

Sl. No.	Scientific Research Publication in Journals
1.	Banerjee A, Pradhan S, Debnath C, Patra NC, Hansda RN, Mondal S, Kumar R and Singh AD (2018). Comparative Pathogenicity Analysis of <i>Cryptococcus neoformans</i> RAPD types. <i>Indian Journal of Animal Research</i> . Online publication with DOI: 10.18805/ijar.B-3637. NAAS Rating : 6.20
2.	Banerjee A, Batabyal K, Debnath C, Joardar SN, Isore DP, Dey S, Taraphder S, Singh AD, Pal S and Samanta I (2019). Antifungal Resistance in <i>cnlac 1</i> Possessing <i>Cryptococcus neoformans</i> Isolated from Domestic and Feral Pigeons in West Bengal, India. <i>Indian Journal of Animal Research</i> . Online publication with DOI: 10.18805/ijar.B-3739. NAAS Rating : 6.20
3.	Mahanti, A., Ghosh, P., Samanta, I., Joardar, S.N., Bandyopadhyay, S., Bhattacharyya, D., Banerjee, J., Batabyal, S., Sar, T.K. and Dutta, T.K., (2018). Prevalence of CTX-M-Producing <i>Klebsiella</i> spp. in Broiler, Kuroiler, and Indigenous Poultry in West Bengal State, India. <i>Microbial Drug Resistance</i> 24(3): 299-306. NAAS Rating : 8.34
4.	Ghosh, P., Mahanti, A., Samanta, I., Joardar, S.N., Batabyal, K., Dey, S., Taraphder, S., Isore, D.P. (2017). Occurrence of extended-spectrum cephalosporinase producing <i>Escherichia coli</i> in kuroiler birds. <i>Veterinarski Arhiv</i> 87 (6): 745-757. NAAS Rating : 6.29
5.	Chowdhury, S., Mandal, G.P., Patra, A.K., Kumar, P., Samanta, I., Pradhan, S., Samanta, A. K. (2018). Different essential oils in diets of broiler chickens: 2. Gut microbes and morphology, immune response, and some blood profile and antioxidant enzymes. <i>Animal Feed Science and Technology</i> 236: 39-47. NAAS Rating : 8.14
6.	Sar, T.K., Samanta, I., Mahanti, A., Akhtar, S., Dash, J.R. (2018). Potential of a polyherbal drug to prevent antimicrobial resistance in bacteria to antibiotics. <i>Scientific Reports</i> 8 (1):10899. NAAS Rating : 10.12
7.	Samanta, A., Mahanti, A., Chatterjee, S., Joardar, S.N., Bandyopadhyay, S., Sar, T.K., Mandal, G.P., Dutta, T.K., Samanta, I. (2018). Pig farm environment as a source of beta-lactamase or AmpC-producing <i>Klebsiella pneumoniae</i> and <i>Escherichia coli</i> . <i>Annals of Microbiology</i> 68(11): 781-791. NAAS Rating : 7.41
8.	Buragohaina, R., Sar, T.K., Samanta, I., Biswas, U., Mandal, T.K. (2019). Disposition of ceftizoxime in Staphylococcal mastitis in Indian crossbred cows. <i>The Veterinary Journal</i> 245: 12-14. NAAS Rating : 7.77

VII.1.15. Department of Veterinary Surgery & Radiology

Sl. No.	Scientific Research Publication in Journals
1.	Guru, J., Nandi, S. K., and Mandal, B. B. 2018. Functional hepatocyte clusters on bioactive blend silk matrices towards generating bioartificial liver constructs. <i>Acta Biomaterialia</i> 67:167-182. NAAS Rating : 12.38
2.	Nandi, S. K., Shivaram, A., Bose, S. and Bandhopadhyay, A. 2018. Silver nanoparticles coated implants to treat osteomyelitis. <i>Journal of Biomedical Materials Research Part B: Applied Biomaterials</i> . 106(3):1073–1083. NAAS Rating : 9.37

Sl. No.	Scientific Research Publication in Journals
3.	Chouhan, D., Guru, J., Chakraborty, B., Nandi, S. K., and Mandal, B. B. 2018. Functionalized PVA-Silk blended nanofibrous mats promote diabetic wound healing via regulation of extracellular matrix and tissue remodeling. <i>Journal of Tissue Engineering and Regenerative Medicine</i> 12(3): e1559-e1570. . NAAS Rating : 10.089
4.	Joseph CM, Samit Kumar Nandi and Biman B. Mandal 2018. Multifunctional Cell Instructive Silk-Bioactive Glass Composite Reinforced Scaffolds Toward Osteoinductive, Proangiogenic, and Resorbable Bone Grafts. <i>Advanced Healthcare Materials</i> 7(10):e1701418. DOI: 10.1002/adhm.201701418. NAAS Rating : 11.11
5.	Sween Gilotra, Dimple Chouhan, Nandana Bhardwaj, Samit Nandi, Biman Mandal, Potential of silk sericin based nanofibrous mats for wound dressing applications. <i>Materials Science and Engineering C</i> , 2018; 90: 420-434. NAAS Rating : 11.08
6.	K. Bavya Devi, Bipasa Tripathy, Prashant N Kumta, Samit Kumar Nandi, and Mangal Roy. 2018. <i>In vivo</i> biocompatibility of zinc doped magnesium silicate ceramics. <i>ACS Biomaterials Science & Engineering</i> 4 (6): 2126–2133. NAAS Rating : 10.432
7.	Priyanka Majee, Shampa Dhar, P. K. Mitra, Lalzawmliana V., Samit Kumar Nandi, Piyali Basak and Biswanath Kundu. 2018. <i>In vivo</i> performance analysis of bone regeneration of tri-layer coated 316L stainless steel implant in rabbit model. <i>Journal of Material Research</i> 33(14): 2106-2117. NAAS Rating : 7.495
8.	Akrity Anand, Biswanath Kundu, Vamsi Krishna Balla and Samit Kumar Nandi. 2018. Synthesis and physico-chemical characterization of different mesoporous bioactive glass nanopowders: In vitro SBF activity and cytotoxicity. <i>Transactions of the Indian Ceramic Society</i> 77(2): 1-12. NAAS Rating : 6.761
9.	Sarmita Sinha, Howa Begam, Vinod Kumar, Samit Nandi, Kubacki, Jerzy and Abhijit Chanda. 2018. Improved performance of the functionalized Nitinol as a prospective bone implant material. <i>Journal of Material Research</i> 7: 1-11. NAAS Rating : 7.495
10.	Samit Nandi, Gary Fielding, Dishary Banerjee, Amit Bandyopadhyay and Susmita Bose. 2018. 3D printed β -TCP bone tissue engineering scaffolds: Effects of chemistry on in vivo biological properties in rabbit tibia. <i>Journal of Material Research</i> 33(14):1939-1947 . . NAAS Rating : 7.495
11.	Yogendra Pratap Singh, Joseph CM, Bibhas K Bhunia, Samit Kumar Nandi, Biman B. Mandal. 2018. Hierarchically Structured Seamless Silk Scaffolds for Osteochondral Interface Tissue Engineering. <i>Journal of Material Chemistry B</i> . 6, 5671-5688 . NAAS Rating : 10.78
12.	Manishekhar Kumar, Prerak Gupta, Sohenii Bhattacharjee, Samit K. Nandi, Biman B. Mandal. 2018. Immunomodulatory injectable silk hydrogels maintaining functional islets and promoting anti-inflammatory M2 macrophage polarization. <i>Biomaterials</i> . 187: 1-17. NAAS Rating : 14.81
13.	Rameshbabu, Arun Prabhu, Sayanti Datta, Kamakshi Bankoti, Elavarasan Subramani, Koel Chaudhury, V. Lalzawmliana, Samit Nandi and Santanu Dhara. 2018. Polycaprolactone Nanofibers Functionalized with Placental Derived Extracellular Matrix for Stimulating Wound Healing Activity. <i>Journal of Materials Chemistry B</i> . 6, 6767-6780. NAAS Rating : 10.78

Sl. No.	Scientific Research Publication in Journals
14.	K. Bavya Devi, Bipasa Tripathy, Abhijit Roy, Boeun Lee, Prashant N. Kumta, Samit Kumar Nandi and Mangal Roy. 2018. In Vitro Biodegradation and In Vivo Biocompatibility of Forsterite Bio-Ceramics: Effects of Strontium Substitution. <i>ACS Biomaterials Science & Engineering</i> 5 (2):530–543. NAAS Rating : 10.432
15.	Kumar V, Sur VP, Guha R, Konar A, Hazra S. 2018. Estrogen Modulates Corneal Nociception and Maintains Corneal Homeostasis in Rat Eye. <i>Cornea</i> . 37(4):508-514. NAAS Rating : 8.464
16.	Dixon P, Ghosh T, Mondal K, Konar A, Chauhan A, Hazra S. 2018. Controlled delivery of pifendone through vitamin E-loaded contact lens ameliorates corneal inflammation. <i>Drug Deliv Transl Res</i> . 8(5):1114-1126. NAAS Rating : 9.395
17.	Phillip Dixon, Keith Christopher, Sarbani Hazra, Namrata Maity, Caryn Plummer, Anuj Chauhan. 2019. In vitro and ex vivo implantation of cystine crystals and treatment by contact lens. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> 562:229-236. NAAS Rating : 8.829

VII.2. RESEARCH PUBLICATIONS FACULTY OF FISHERY SCIENCES

VII.2.1. Department of Aquaculture

Sl. No.	Scientific Research Publication in Journals
1.	Mandal, A. and Das, S. K. (2018). Comparative efficacy of neem (<i>Azadirachta indica</i>) and non-neem supplemented biofloc media in controlling the harmful luminescent bacteria in natural pond culture of <i>Litopenaeus vannamei</i> . <i>Aquaculture</i> , 492:157-163 (Elsevier Science Publishers B. V., Netherlands), https://doi.org/10.1016/j.aquaculture.2018.04.006 . NAAS rating: 8.71
2.	Mandal, A., Das, S. K., Majumder, A. (2018). Studies on physico-chemical environment and management of crab (<i>Scylla serrata</i>) farming in 24 Parganas (West Bengal). <i>Indian Journal Animal Research</i> ; 52 (12): 1782-1789. DOI:10.18805/ijar.B-3423. NAAS rating: 6.2
3.	Mondal, B. and Das, S. K. (2019). Comparative evaluation of mahua (<i>Bassia latifolia</i>) oil cake and castor bean (<i>Ricinus communis</i>) seed as fish toxicants for tilapia (<i>Oreochromis mossambicus</i>) and panchax (<i>Aplocheilichthys panchax</i>). <i>Aquaculture Research</i> (in press) John Wiley and Sons Ltd.). NAAS rating: 7.48
4.	Dinda R., Mandal, A and Das, S. K. (2019). Potential of neem, <i>Azadirachta indica</i> (A. Juss) supplemented biofloc in replacing artificial feed in common carp, <i>Cyprinus carpio</i> var. <i>communis</i> (Linnaeus) culture. <i>Journal of Applied Aquaculture</i> (in press) Taylor & Francis, https://doi.org/10.1080/10454438.2019.1645076 , NAAS rating: 7.5
5.	T. K. Ghosh, Y.H Chauhan and R. N. Mandal (2019). Growth performance of <i>Labeo bata</i> (Hamilton, 1822) in freshwater and its acclimatization in brackish water with betaine as feed additive. <i>Aquaculture</i> . 501 (2019) 128-134. NAAS rating: 8.71

VII.2.2. Department of Aquatic Animal Health

Sl. No.	Scientific Research Publication in Journals
1.	Karmakar S, Abraham T.J, Kumar S, Kumar S, Shukla S.P, Roy U and Kumar K. (2019): Triclosan exposure induces varying extent of reversible antimicrobial resistance in <i>Aeromonas hydrophila</i> and <i>Edwardsiella tarda</i> . <i>Ecotoxicology and Environmental Safety</i> , 180: 309-316. (NAAS rating: 9.97; IF: 3.97).
2.	Hoque F, Abraham T J, and Jaisankar P (2019): Isolation and partial characterization of secondary metabolites from fish-borne antagonistic bacterium, <i>Pseudomonas aeruginosa</i> . <i>Indian Journal of Fisheries</i> , 66(1): 81-91. (NAAS rating: 6.28)
3.	Hoque F, Abraham T.J., Nagesh T.S. and Kamilya D. (2018): <i>Pseudomonas aeruginosa</i> FARP72 offers protection against <i>Aeromonas hydrophila</i> infection in <i>Labeo rohita</i> . <i>Probiotics and Antimicrobial Proteins</i> , https://doi.org/ 10.1007/s12602-018-9456-1 . Published online on 15 August 2018. (NAAS rating: 8.35; IF: 2.35).
4.	Purkait S, Abraham T.J., Karmakar S, Dey B and Roy A (2018): Inhibition of fish pathogenic <i>Aeromonas hydrophila</i> and <i>Edwardsiella tarda</i> by <i>Centella asiatica</i> in-vitro. <i>Journal of Aquaculture Research and Development</i> , 9(2): 524. doi: 10.4172/2155-9546.1000524. (NAAS: Nil; Impact factor: 1.47).
5.	Sanyal K, Mukherjee D, Guchhait A and Dash G (2018): Isolation and identification of different parasites from Indian major carps and exotic carps from South 24 Parganas West Bengal. <i>Indian J. Animal Sci.</i> 88 (8): 979-984. (NAAS Rating. 6.09)

VII.2.3. Department of Fishery Resources Management

Sl. No.	Scientific Research Publication in Journals
1.	Farhana Hoque, T Jawahar Abraham, T S Nagesh and Dibyendu Kamilya (2018): <i>Pseudomonas aeruginosa</i> FARP72 Offers Protection Against <i>Aeromonas hydrophila</i> Infection in <i>Labeo rohita</i> Probiotics and Antimicrobial Proteins. https://doi.org/10.1007/s12602-018-9456-1 . NAAS rating : 8.35
2.	Samanta R, Chakraborty, S K, Shenoy, L, Nagesh, T S, Behera, S, Bhoomik, T S (2018): Bycatch characterization and relationship between trawl catch and lunar cycle in single day Shrimp Trawls from Mumbai Coast of India. <i>Regional Studies in Marine Science</i> 17:47-58. NAAS: 7.152.

VII.3. RESEARCH PUBLICATIONS OF FACULTY OF DAIRY TECHNOLOGY

VII.3.1 Department of Dairy Microbiology

Sl. No.	Scientific Research Publication in Journals
1	Hati S, Patel N and Mandal S (2018): Comparative growth behavior and bio-functionality of lactic acid bacteria during fermentation of soy milk and bovine milk. <i>Probiotics and Antimicrobial Proteins</i> 10(2): 277-283. NAAS rating: 8.35
2	Prasad W, Khamrui K, Mandal S and Badola R (2018): Effect of combination of essential oils on physicochemical and sensorial attributes of burfi in comparison with individual essential oil and BHA. <i>International Journal of Dairy Technology</i> 71(3): 810-819. NAAS rating: 7.23
3	Yadav K, Bajaj R K, Mandal S, Saha P and Mann B (2018): Evaluation of total phenol content and antioxidant properties of encapsulated grape seed extract in yoghurt. <i>International Journal of Dairy Technology</i> 71(1): 96-104. NAAS rating: 7.23

Sl. No.	Scientific Research Publication in Journals
4	Hati S, Patel N, Sakure A and Mandal S (2018): Influence of whey protein concentrate on the production of antibacterial peptides derived from fermented milk by lactic acid bacteria. <i>International Journal of Peptide Research and Therapeutics</i> 24(1): 87-98. NAAS rating: 7.13
5	Anand S, Mandal S, Singh K S, Patil P and Tomar S K (2018): Synbiotic combination of <i>Lactobacillus rhamnosus</i> NCDC 298 and short chain fructooligosaccharides prevents enterotoxigenic <i>Escherichia coli</i> infection. <i>LWT Food Science and Technology</i> 98: 329-334. Impact factor: 3.129
6	Singla V, Mandal S, Sharma P, Anand S and Tomar S K (2018): Antibiotic susceptibility profile of <i>Pediococcus</i> spp. from diverse sources. <i>3 Biotech</i> 8(12):489. Impact factor: 1.497
7	Anand S, Mandal S and Tomar S K (2019): Effect of <i>Lactobacillus rhamnosus</i> NCDC 298 with FOS in Combination on Viability and Toxin Production of Enterotoxigenic <i>Escherichia coli</i> . <i>Probiotics and Antimicrobial Proteins</i> 11(1): 23-29. NAAS rating: 8.35
8.	Halder, L, and Gandhi, D N (2019) Cholesterol-lowering effects of <i>Bacillus coagulans</i> B37 and <i>Bacillus pumilus</i> B9 strains in a rat animal model. <i>Indian Journal of Animal Research</i> 53(4) (2019) : 469-475. NAAS rating: 6.20

VII.4. RESEARCH PUBLICATIONS OF DIRECTORATE OF RESEARCH, EXTENSION & FARMS

Sl. No.	Scientific Research Publication in Journals
1.	Debbarma Ni, Samanta A. K., Dhara K. C., Debnath T., Singh V. and Halder A. (2018) Performance of Growing Black Bengal Goats under Different Management Systems of Rearing. <i>Journal of Animal Research</i> 8(4) 633-641. . NAAS rating 6.2
2.	Bhattacharya. R., Das, P., Joardar, S.N., Biswas, B.K., Batabyal, S., Das, P.K., Nandi, S. K. (2019). Novel decellularized animal conchal cartilage graft for application in human patient. <i>J Tissue Eng Regen Med.</i> ; 13(1):46-57. Impact factor: 4.089

VIII. HUMAN RESOURCE DEVELOPMENT (HRD).

Faculty members and scientists of West Bengal University of Animal & Fishery Sciences always look forward for interactive and collaborative work with the scientists from other institutes within the State, Country and other countries to strengthen its basic, applied and strategic research in the fields of Veterinary and Animal Sciences, Dairy Technology and Fishery Sciences. They participate in different conferences, training programmes, summer/winter school, short courses on their related subjects, seminars, symposiums, workshops etc. to refresh and update themselves with the latest scientific knowledge and technologies. The University also encourages its faculty members to participate in such Human Resource Development programs. The important programs attended by the Faculty members and scientists during 2017-18, are depicted below:

VIII.1. PARTICIPATION OF THE TEACHERS / SCIENTISTS/ OFFICERS IN THE SEMINAR, SYMPOSIUM, WORKSHOP, TRAINING PROGRAMMES ETC.

VIII.1.A. FACULTY OF VETERINARY & ANIMAL SCIENCES

VIII.1.A.1. Department of Animal Genetics & Breeding

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Dr. SanjoyDatta, Assistant Professor	Pre-conference workshop of 27th Annual Conference Indian Pharmacological Society, West Bengal & Eastern Regional Colloquium	Deptt. Of Vety. Pharmacology and Toxicology, WBUAFS, Mohanpur.	8 August, 2018 1 day
	International Symposium and 8 th Conference of Indian Meat Science Association	Belgachia campus, WBUAFS, Kolkata	22-24 November, 2018 3 days
	XXVI Annual Conference of IAAVR and National Symposium	Belgachia campus, WBUAFS, Kolkata	1-2February, 2019 2 days
Dr. UttamSarkar, Assistant Professor	CAFT on Tools for genetic improvement of Animal Welfare and Productivity	DCB Division, NDRI, Karnal	25 February -17 March, 2019
Dr. SanjoyDatta, Assistant Professor			21 days

VIII.1.A.2. Department of Animal Nutrition

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Dr. G.P. Mandal, Associate Professor Dr. P.N. Chatterjee, Assistant Professor	XI Biennial ANA Conference	BASU, Patna	19-21 November, 2018 3 days
Prof. B. Roy, Professor	International Symposium & 8 th conference of Indian Meat Science Association (IMSACON-VIII)	Belgachia campus, WBUAFS, Kolkata	22-24 November, 2018 3 days
Dr. G.P. Mandal, Associate Professor Dr. P.N. Chatterjee, Assistant Professor Dr. A.K. Patra, Assistant Professor Dr. S. Soren, Assistant Professor	19 th Indian Veterinary Congress(IVC) XXVI Annual Conference of IAAVR	Belgachia campus, WBUAFS, Kolkata	1-2 February, 2019 2 days
Dr. Paresh Nath Chatterjee, Assistant Professor	26 th West Bengal Science and Technology Congress	Science City, Govt. of West Bengal	28 February - 1 March, 2019 2 days

VIII.1.A.3. Department of Livestock Farm Complex

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Dr.ChittapriyaGhosh, Assistant Professor	Pre-conference workshop of 27th Annual Conference Indian Pharmacological Society, West Bengal & Eastern Regional Colloquium	Deptt. ofVety. Pharmacology and Toxicology, WBUAFS, Mohanpur.	8 August, 2018 1 day
	ICAR Sponsored Winter School on “Nutritional Strategies to Enhance Livestock Productivity and Farm Economy”.	Animal Nutrition Division, ICAR-NDRI, Karnal	5-25 September, 2018 21 days
	XXVI Annual Conference of IAAVR and National Symposium		

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Dr.M.C.Pakhira, Assistant Professor	International Symposium & 8 th conference of Indian Meat Science Association (IMSACON-VIII)	Belgachia campus, WBUAFS, Kolkata	22-24 November, 2018 3 days
	“Importance of veterinary, dairy and fishery education in the economic scenario of the country”	Belgachia campus, WBUAFS, Kolkata	2 January, 2019 1 day
Dr.ChittapriyaGhosh, Assistant Professor Dr. M.C. Pakhira, Assistant Professor	19 th Indian Veterinary Congress & XXVI Annual Conference of IAAVR on “ Innovative Progress in Animal health and production for safe and secured food under one health perspective”	Belgachia campus, WBUAFS, Kolkata	1-2 February, 2019 2 days

VIII.1.A.4. Department of Livestock Production Management

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Dr S. Bera, Assistant Professor	CAFT training programme on “Acclimation and adaptation of high altitude livestock in changing climate scenario”	IVRI, Izatnagar	1– 21 June, 2018 21 days
	Lecture on “Integrated farming- Livestock Management”	IBRAD, Kolkata	23 July, 2018 1 day
	Lecture on “Management of Sheep & Goat”	Farmer’s Hostel, WBUAFS	27 August, 2018 1 day
	Lecture on “Unnata Paddhatite Hans Murgi Palan”	FACC, BCKV	19 November, 2018 1 day
	Participation & Poster presentation in International Symposium on ‘Technological Innovations in Muscle Food Processing for Nutritional Security, Quality and Safety’ & 8th Conference of at IMSACON-VIII	WBUAFS, Kolkata	22-24 November, 2018 3 days
	Health camp cum goat exhibition and goat training under AICRP-G	Rangabelia, South 24 Pgs	7-8 December, 2018 2 days
	An expert in Grassroots Field Exposure Initiatives (GFES)(Indo-UK collaborative programme)	Gosaba, Sundarban	10 December, 2018 1 day
	Lecture on “Management & common diseases of goat” (As expert)	ATC, R K Mission Ashram, Narendrapur	12 December, 2018 1 day
	Paper presentation at 3 rd Regional Science & Technology Congress (Southern Region)	Bidhannagar College, Salt Lake	18-19 December, 2018 2 days
	Lecture on “Piggery Development as a business venture” (As expert)	ATC, R K Mission Ashram, Narendrapur	29 December, 2018 1 day
	Farmers Training under Biotech Kisan Hub (As expert)	WBUAFS, Kolkata	9 January, 2019 1 day
	Participation & Oral presentation in the 19th IVC, XXVI Annual Conference of IAAVR & National Symposium on ‘Innovative Progress in Animal Health and Production for Safe and Secured Food under one health perspective’	WBUAFS, Kolkata	1-2 February, 2019 2 days

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Prof. R. Samanta, Professor Prof.N. Ghosh, Professor	Participation in International Symposium on 'Technological Innovations in Muscle Food Processing for Nutritional Security, Quality and Safety' & 8th Conference of at IMSACON-VIII	WBUAFS, Kolkata	22-24 November, 2018 3 days
	Participation in the 19th IVC, XXVI Annual Conference of IAAVR & National Symposium on 'Innovative Progress in Animal Health and Production for Safe and Secured Food under one health perspective'	WBUAFS, Kolkata	1-2 February, 2019 2 days

VIII.1.A.5. Department of Livestock Products Technology

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Prof. S. Biswas, Professor & Head	Innovation in livestock sector in doubling farmers income..... Meat value chain, ICAR 21 days summer school training	NRC on Meat, Hyderabad	30 July, 2018 1 day
	Participation & Lead paper presentation in the 19 th IVC, XXVI Annual Conference of IAAVR & National Symposium on 'Innovative Progress in Animal Health and Production for Safe and Secured Food under one health perspective'	WBUAFS, Kolkata	1-2 February, 2019 2 days
Dr.Gopal Patra, Assistant Professor	Lecture on "Sheep & Goat meat processing"	Farmer's Hostel, WBUAFS	30 August, 2018 1 day
	Lecture on " Sheep & Goat meat processing and value addition"	Ramkrishna Ashram KVK, Nimpith	27 September, 2018 1 day
	Lecture on " Sheep & Goat meat processing and value addition"	Farmer's Hostel, WBUAFS	31 October, 2018 1 day
	Paper presentation at 3 rd Regional Science & Technology Congress (Southern Region)	Bidhannagar College, Salt Lake	18-19 December, 2018 2 days
	Participation & Oral presentation in the 19 th IVC, XXVI Annual Conference of IAAVR & National Symposium on 'Innovative Progress in Animal Health and Production for Safe and Secured Food under one health perspective'	WBUAFS, Kolkata	1-2 February, 2019 2 days

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Prof. S. Biswas, Professor & Head Dr. Debasish Bhattacharyya, Assistant Professor Dr. Gopal Patra, Assistant Professor	Participation in International Symposium on 'Technological Innovations in Muscle Food Processing for Nutritional Security, Quality and Safety' & 8 th Conference of IMSACON-VIII	WBUAFS, Kolkata	22-24 November, 2018 3 days
Dr. Debasish Bhattacharyya, Assistant Professor	Participation & Oral presentation in the 19 th IVC, XXVI Annual Conference of IAAVR & National Symposium on 'Innovative Progress in Animal Health and Production for Safe and Secured Food under one health perspective'	WBUAFS, Kolkata	1-2 February, 2019 2 days

VIII.1.A.6. Department of Veterinary Anatomy & Histology

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Prof. S. Ray, Professor Prof. P. Das, Professor Dr. A. K. Mandal, Associate Professor	International Symposium on 'Technological Innovations in Muscle Food Processing for Nutritional Security, Quality and Safety' & 8 th Conference of IMSACON-VIII	WBUAFS, Kolkata	22-24 November, 2018 3 days
Prof. S. Ray, Professor Prof. P. Das, Professor Dr. A. K. Mandal, Associate Professor Dr. N.K. Tudu, Assistant Professor	19 th IVC, XXVI Annual Conference of IAAVR & National Symposium on 'Innovative Progress in Animal Health and Production for Safe and Secured Food under one health perspective'	WBUAFS, Kolkata	1-2 February, 2019 2 days

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Prof. S.Ray, Professor	33 rd National Symposium of Indian Association of Veterinary Anatomist	CVS & AH, CAU, Aizwal	28-30 November, 2018
Prof. P. Das, Professor			3 days
Dr. N.K. Tudu, Assistant Professor	International Conference on Agriculture and Allied Sciences: The Productivity, Food Security and Ecology	BCKV, Kalyani	13-14 August, 2018 2 days
	ICAR-Winter School	DUVASU, Mathura, UP	14 November - 4 December, 2018 21 days

VIII.1.A.7. Department of Veterinary Biochemistry

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Dr. S. Batabyal, Professor & Head Dr. A. Maity, Associate Professor	Third Convention of SVBBI and National Symposium on “Bridging Biochemical Interventions and Environmental Remediations for One Health Improvement”	College of Veterinary and Animal Sciences, LUVAS, Hisar, Haryana	2-3 November, 2018 2 days
	International symposium & VIII-IMSACON-2018 on “Technological Innovations In Muscle Food Processing For Nutritional Security, Quality And Safety”	WBUAFS Kolkata	22-24 November, 2018 3 days
	19 th Indian Veterinary Congress & XXVI Annual Conference of IAAVR	WBUAFS Kolkata	1-2 February, 2019 2 days

VIII.1.A.8. Department of Veterinary Clinical Complex

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Dr. M Mondal, Associate Professor Dr. P. Mukherjee, Assistant Professor Dr. S.S. Kesh, Assistant Professor	International symposium & VIII-IMSACON-2018 on “Technological Innovations In Muscle Food Processing For Nutritional Security, Quality And Safety”	WBUAFS Kolkata	22-24 November, 2018 3 days

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Dr. M Mondal, Associate Professor P. Mukherjee, Assistant Professor Dr. S.S. Kesh, Assistant Professor Dr.S. Chaudhuri, Assistant Professor	19 th Indian Veterinary Congress & XXVI Annual Conference of IAAVR	WBUAFS Kolkata	1-2 February, 2019 2 days

VIII.1.A.10. Department of Veterinary Epidemiology & Preventive Medicine

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Dr. Partha Sarathi Jana, Assistant Professor	The Role of Veterinary Public Health in Improving Food Security & Safety through One Health Approach, XIII Biennial National Conference of APHV	College of Veterinary and Animal Scs., G.B. Pant University of Agri. And Tech., Pantnagar	30 November -1 December, 2018 2 days
	Innovative Progress in Animal Health and Production for Safe and Secured Food under One Health Perspective, 19 th Indian Veterinary congress and XXVI Annual Conference of IAAVR	WBUAFS, Kolkata	1-2 February, 2019 2 days
Dr. Chanchal Guha, Professor	One Health India Conference, DBT, Ministry of Science & Technology	New Delhi	18-19 February, 2019 2 days
Dr. Partha Sarathi Jana, Assistant Professor	Training on 'Bovine Tuberculosis Diagnosis by Tuberculin Skin Testing' under DBT on MyDAN	Deptt. of Public Health & Epidemiology, LUVAS, Hisar	20-21 February, 2019 2 days
Dr. Chanchal Guha, Professor Dr. Ujjwal Biswas, Professor Dr. Partha Sarathi Jana, Assistant Professor	Importance of Veterinary, Dairy and Fishery education in the present economic scenario of the country, Seminar during 25 th Foundation Day Celebration of WBUAFS	WBUAFS, Kolkata	2 January, 2019 1 day

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Dr. Chanchal Guha, Professor	Holistic Approach in Veterinary Medicine for Better Animal Health to Meet Challenges of One Health Mission, 37 th Annual Convention of ISVM	College of Veterinary and Animal Science, Bikaner RAJUVAS, Bikaner, Rajasthan	1-3 February, 2019 3 days

VIII.1.A.11. Department of Veterinary Gynaecology & Obstetrics

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Prof. Siddhartha Basu, Professor	Seminar on “Importance of Veterinary, Dairy and Fishery education in the present economic scenario of the country”	WBUAFS, Kolkata	2 January, 2019 1 day
Prof. Kalyani Ray, Professor	19 th IVC & xxvi Annual conference of IAAV R and symposium entitled “Innovative progress in Animal Health and Production for safe and Secured Food Under One Health Perspective”	WBUAFS, Kolkata	1-2 February, 2019 2 days
Dr. Pradip Sarkar, Assistant Professor			
Dr. Durgadas Mandal, Assistant Professor			
Prof. Kalyani Ray, Professor	Second National Workshop of ICAR-BSMA Committee for Veterinary Clinical Subjects	Bombay Veterinary College	16-17 November, 2018 2 days
Dr. Pradip Sarkar, Assistant Professor	Training on ‘Current reproductive technologies vis-s-vis fertility augmentation in farm animals’	Dept. Vety. Gynaecology & Obstetrics, G.A.D.V.A.S.U., Ludhiana, Punjab	9-29 October, 2018 21 days
Dr. Pradip Sarkar, Assistant Professor	Training on ‘Molecular techniques in sheep reproduction’	ICAR- C.S.W.R.I., Avikanagar	14-23 May 2018 7 days
Dr. Durgadas Mandal, Assistant Professor	International Symposium & Conference on “Technological innovations in muscle food processing for nutrition security, quality and safety”	WBUAFS, Kolkata	22-24 November, 2018 3 days

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Dr. Amit Kumar Saren Assistant Professor	Conference of Indian Meat Science Association (IMSACON-VIII) and International Symposium	WBUAFS, Kolkata	22-24 November, 2018 3 days
	ICAR sponsored short course on “Laparoscope aided artificial insemination and embryo transfer in sheep	CSWRI, Avikanagar, Rajasthan	14-23 January, 2019 10 days
	Annual Conference of IAAVR and National Symposium	WBUAFS, Kolkata	1-2 February, 2019 2 days

VIII.1.A.12. Department of Veterinary Medicine, Ethics & Jurisprudence

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Dr. Amit Raj Gupta Associate Professor	Importance of Veterinary, Fisheries and Dairy Education in the present Economic Scenario of the Country	WBUAFS, Kolkata	2 January, 2019 1 day
Prof. Chandan Lodh, Professor	Sixteen Annual Convention of ISACP & National Symposium on exploring New Horizons in Canine Practice and Welfare	Khalsa College of Veterinary and Animal Sciences, Amritsar	26 – 28 February, 2019 3 days

VIII.1.A.13. Department of Veterinary Microbiology

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Dr. Indranil Samanta, Assistant Professor	Television Talk Show for farmers on ‘ <i>Borshakalin Murgir rog O protikar</i> ’	Doordarshan Kendra, Kolkata	10 July, 2018 1 day
	Invited lecture on ‘Antimicrobial Resistance: role of Veterinarian’ organized by Department of Veterinary Pharmacology and Toxicology, WBUAFS under the project “ICAR-Outreach programme on monitoring of drug residue”	WBUAFS	16 November, 2018 1 day

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/ s&Duration
	Presented Lead paper in Antimicrobial Resistance session in 19 th Indian Veterinary Congress and Annual Conference of IAAVR organized by WBUAFS and IAAVR.	WBUAFS	1-2 February, 2019 2 days
	Training programme for 'CPCSEA Nominees' organized by Committee for the purpose of control and supervision of experiments on animals (CPCSEA)	Ministry of Environment, Forest and climate change, Government of India, New Delhi	17-18 January, 2019 2 days
	One Health India Conference (2019) Organized by DBT, Government of India in SCOPE Complex, New Delhi, India	DBT, Government of India , New Delhi	18-19 February, 2019 2 days
	Training on 'Bovine Tuberculosis diagnosis by tuberculin skin testing'	LUVAS, Hissar	20-21 February, 2019 2 days
Dr. S. N. Joardar, Professor	17 th Convocation of National Academy of Veterinary Sciences (I) and scientific seminar on Livestock sector towards one health food security and safety.	Orissa University of Agriculture and Technology (OUAT), Bhubaneswar, Odisha	19-20 December, 2018 2 days
Dr. S. N. Joardar, Professor Dr. Indranil Samanta, Assistant Professor	Indian Society of Extension Education National Seminar (2018) on 'Integrated farming system for enhancing farmer's income and nutritional security'	WBUAFS	5-7 December, 2018 2 days

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Dr. K Batabyal, Assistant Professor	XIII Biennial National Conference of APHV and national Symposium on 'The role of veterinary public health in improving food security and safety through one health approach'.	CoVAS, GBPUAT, Pantnagar, Uttarakhand	30 November – 1 December, 2018 2 days
Dr. S. N. Joardar, Professor Dr. Indranil Samanta, Assistant Professor Dr. K Batabyal, Assistant Professor	International symposium & VIII-IMSACON-2018 on Technological Innovations In Muscle Food Processing For Nutritional Security, Quality And Safety.	WBUAFS , Belgachia, Kolkata	22-24 November, 2018 3 days
Dr. D.P. Isore, Assistant Professor Dr. S. Dey, Assistant Professor Dr. K Batabyal, Assistant Professor	Seminar on 'Importance of Veterinary, Dairy and Fishery education in the present economic scenario of the country'	WBUAFS , Belgachia, Kolkata	2 January, 2019 1 day
Dr. S. N. Joardar, Professor Dr. D.P. Isore, Assistant Professor Dr. S. Dey, Assistant Professor Dr. K Batabyal, Assistant Professor	19 th Indian Veterinary Congress and XXVI annual conference of IAAVR and National symposium on 'Innovative Progress in Animal Health and Production for Safe and Secured Food Under One Health Perspective'	WBUAFS	1-2 February, 2019 2 days

VIII.1.A.13. Department of Veterinary Pathology

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Dr. S. Pradhan, Assistant Professor	“Technological Innovations in Muscle Food processing for Nutritional Security, Quality and Safety” and 8 th Conference of IMSACON-VIII	WBUAFS, Kolkata	22-24 November, 2018 3 days
	Refresher Course Winter School on “Recent Advancement in Food and Bioprocess Technology”	Jadavpur University	2-22 January, 2019 21 days
Dr. S. Mondal Assistant Professor	Refresher Course Winter School on “Recent approaches in diagnostics pathology & oncology”	GADVASU	12 November – 2 December, 2018 21 days
Dr. S.K. Mukhopadhyay Professor Dr. N.C. Patra Assistant Professor Dr. R.N. Hansda Assistant Professor Dr. S. Mondal Assistant Professor	“Importance of Veterinary, Dairy and Fishery education in the present economic scenario of the country” and 25 th Foundation Day Celebration of WBUAFS	WBUAFS, Kolkata	2 January, 2019 1 day
Dr. S.K. Mukhopadhyay Professor Dr. N.C. Patra Assistant Professor Dr. S. Pradhan Assistant Professor Dr. R.N. Hansda Assistant Professor Dr. S. Mondal Assistant Professor	“Innovative Progress in animal Health and Production for Safe and Secured Food Under one Health Perspective” and 19 th IVC & XXVI Annual Conference of IAAVR	WBUAFS, Kolkata	1-2 February, 2019 2 days
Dr N.C.Patra Assistant Professor	Orientation Programme	Jadavpur University	6 February – 5 March, 2019 28 days

VIII.1.A.14. Department of Veterinary Pharmacology & Toxicology

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Prof. T.K. Mandal, Professor	International symposium & 8 th Conference of Indian Meat Science Association (IMSACON-VIII)	WBUAFS, Kolkata	22-24 November, 2018 3 days
Dr. T.K. Sar, Assistant Professor			
Prof. T.K. Mandal, Professor	World Zoonosis Day	WBUAFS, Kolkata	6 July, 2019
	World Rabies Day	WBUAFS, Kolkata	27 September, 2019

VIII.1.A.15. Department of Veterinary Physiology

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Prof. Pradip Kumar Das, Professor	Presented Lead Paper on the International Symposium on 'Technological Innovations in Muscle Food Processing for Nutritional Security, Quality and safety'	WBUAFS, Kolkata	22-24 November, 2018 3 days
	Presented Lead Paper on the National Symposium on 'Augmentation of Animal Productivity under Changing Socio-economic Scenario'	NDRI, Karnal	27-28 November, 2018 2 days
	Co-chaired a session of National Symposium on 'Innovative progress in animal health and production for safe and secured food under one health perspective'	WBUAFS, Kolkata	1-2 February, 2019 2 days
	Conducted the Quiz Competition for students on 'Poultry Development'	International Poultry Fair, 2019, Kolkata	19-21 February, 2019 2 days
	Invited Lecture in the plenary session of the National Seminar on 'Waste Management for Greener and Cleaner Environment'	University of Kalyani	25-26 March, 2019 2 days

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Dr. Prabal Ranjan Ghosh, Associate Professor	Participated and presented paper in the International Symposium on 'Technological Innovations in Muscle Food Processing for Nutritional Security, Quality and safety'	WBUAFS, Kolkata	22-24 November, 2018 3 days
	Participated and presented paper in the National Symposium on 'Augmentation of Animal Productivity under Changing Socio-economic Scenario'	NDRI, Karnal	27-28 November, 2018 2 days
	Participated and presented paper in a session of National Symposium on 'Innovative progress in animal health and production for safe and secured food under one health perspective'	WBUAFS, Kolkata	1-2 February, 2019 2 days
Dr. Kinsuk Das, Assistant Professor	Invited Lecture in the session 'Nano for Medicine' and a Session Chairperson at the 3 rd International Conference on Nanomaterials: Synthesis, Characterization and Applications (ICN 2018)	Mahatma Gandhi University, Kerala.	11-13 May, 2018 3 days
	Attended Wellcome Trust UK/ DBT India Alliance Science Communication Workshop	Indian National Science Academy, New Delhi	25-26 September, 2018 2 days
Dr. Joydip Mukherjee, Assistant Professor	Resource Person in Farmers' Training Programme on 'Scientific rearing practices of Garole Sheep and Black Bengal Goat'	WBUAFS	12 November, 2018 1 day
	Resource Person in Refresher and Hands on Training Course on 'Advanced Diagnostics Imaging in Veterinary Practices'	WBUAFS	10-15 December, 2018 6 days

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/ s&Duration
Dr. Dipak Banerjee, Assistant Professor	Expert in Krishi Darshan programme on DD Bangla on Duck Farming	Prasar Bharati	9 October, 2018 1 day
	Presented oral presentation on the International Symposium on 'Technological Innovations in Muscle Food Processing for Nutritional Security, Quality and safety'	WBUAFS, Kolkata	22-24 November, 2018 3 days
	Presented poster on the National Symposium on 'Augmentation of Animal Productivity under Changing Socio-economic Scenario'	NDRI, Karnal	27-28 November, 2018 2 days
	Resource Person in hands on training on 'Refresher and Hands on Training Course on Advanced Diagnostics Imaging in Vety. Practice.'	WBUAFS	10-15 December, 2018 6 days
	Resource Person in Farmers' Training Programme on 'Preventive care of sheep and goat diseases.'	DREF, WBUAFS	8 January ,2019 1 day
	Participated as a member of organizer in the Quiz Competition for students on 'Poultry Development'	International Poultry Fair, 2019, Kolkata	19-21 February, 2019 2 days

VIII.1.A.16. Department of Veterinary Public Health

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Dr. Chanchal Debnath Associate Professor	Attended and presented paper on “Detection of Nitrate in Processed and Ready to Eat Meat Products in and Around Kolkata” in the International Symposium entitled Technological Innovations in Muscle Food Processing for Nutritional Security, Quality and Safety.	WBUAFS, Kolkata	22-24 November, 2018 3 days
	Acted as Chairman in a Technical Session in a National Symposium on Role of Veterinary Public Health in Improving Food Security and Safety Through One Health Approach	CoVAS, G.B. Pant University of Agri. & Tech., Pantnagar-263145, Uttarakhand	30 November – 1 December, 2018 2 days
	Participated and presented paper in the national symposium entitled ‘ <i>Innovative Progress in Animal Health and Production for Safe and Secured Food Under One Health Perspective</i> ’ in 19 th Indian Veterinary Congress(IVC) and XXVI Annual Conference of Indian Association for the Advancement of Veterinary Research (IAAVR)	WBUAFS, Kolkata	1-2 February, 2019 2 days

VIII.1.A.17. Department of Veterinary Surgery & Radiology

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/ s&Duration
Samit Kumar Nandi Professor	Presented paper & acted as Rapporteur, Session I. Livestock, poultry and fisheries resources: A way to livelihood by doubling farmers' income of International conference and IMSACON-VIII on "Technological Innovations in Muscle Food Processing for Nutritional Security, Quality and Safety"	WBUAFS, Kolkata	22-24 November, 2018 3 days
	Lead paper delivered at 19th Indian Veterinary Congress, XXVI Annual conference of IAAVR and National Symposium on "Innovative progress in animal Health and production for safe and secure food under one health prospective"	WBUAFS, Kolkata	1-2 February, 2019 2 days
Prof. Debaki Ghosh, Professor	Lead paper presented in National Congress on canine practice	Khalsa College of Veterinary & Animal Sciences, Amritsar Punjab	26 – 28 February, 2019 3 days
Prof. Sarbani Hazra, Professor	Workshop on Ocular Infections at ARVO-INDIA	Hotel Taj Vedanta, Hyderabad	27 July, 2018
	ARVO-India, Indian eye research conference, 2018 LVPEI, Hyderabad	Hotel Taj Vedanta, Hyderabad	28-29 July 2018
Dr. Asit Kumar Maji, Assistant Professor	Oral Presentation "Advances in Diagnostic Imaging and Surgical Techniques in Farm and Companion Animals" and Co-Chairman in Radiology and Imaging Session.	NAU, Navsari, Gujarat	22 – 24 November, 2018 3 days
	APCRICON2018 (Medico and Vets. Assoc) CME and Oral Presentation	Bardhaman Mahavir Med. College New Delhi,	6 – 7 July, 2018 3 days

VIII.1.B. FACULTY OF FISHERY SCIENCES

VIII.1.B.1. Department of Aquaculture

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Prof. T. K. Ghosh, Professor	ISEE National Seminar-2018	WBUAFS	5-7 December, 2018 3 days
Dr. ShibKinkar Das, Professor	“Integrated Farming System for Enhancing Farmers’ Income and Nutritional Security”		
Dr. A. Mondal, Associate Professor	19 th Indian veterinary congress & 26 th Annual Conference of IAAVR	WBUAFS	1-2 February, 2019 2 days
Dr. ShibKinkar Das, Professor	NICRA Workshop on Impact of Climate Change on Inland Open Water Fisheries	ICAR-CIFRI, Barrackpore	15 March, 2019 1 day
	National Seminar on Advancement in green technology for controlling and managing current environmental pollution	University of Kalyani	22 - 23 March, 2018 2 days
	National Seminar on Waste Management for Greener and Cleaner Environment	University of Kalyani	25-26 March, 2019 2 days
Prof. T. K. Ghosh, Professor	3 rd Regional Science and Technology Congress, Southern Region	Bidhannagar College, Salt Lake, Kolkata	18-19 December, 2018 2 days

VIII.1.B.2. Department of Aquatic Animal Health

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Prof. G.D. Dash Professor & Head	Awareness programme on Acute Hepatopancreatic Necrosis Disease (AHPND).	Hasnabad, 24 Pgs (N)	3 March, 2018 1 day
	Awareness Camp on AMR in Shrimp Farming.	Baruipur, 24 Pgs (S)	5 October, 2018 1 day
	Shrimp diseases and its Management.	Hasnabad, 24 Pgs (N)	21 February, 2019 1 day
	Parasitic diseases of Fishes.	DREF, WBUAFS	11 March, 2019 1 day
	Fish and Shrimp diseases In ponds.	CIFE, Saltlake, Kolkata	13 March, 2019 1 day
	Health Management in Shrimps (<i>P. vannamei</i>)	Namkhana, 24 Pgs (S)	20 March, 2019 1 day
Prof. T.J. Abraham, Professor	International Conference on Changing Contours of Blue Economy-Promises and Challenges (ICBE-2019)	Centre of Advanced Study in Marine Biology, Annamalai University, Parangipettai, Tamil Nadu	7-8 February, 2019 2 days
	Workshop on Syllabus Revision and Academic Reformation in Higher Education	ICAR-CIFE, Mumbai	18-19 February, 2019 2 days
Sri P. Mali Asst. Professor	Training programme on – “Concept building and basis statistical analysis for inland fisheries management”.	ICAR-CIFRI, Barrackpore	3 – 10 August, 2018 7 days
	International Symposium & 8 th Conference of Indian Meat Science Association (IMSACON-VIII) on “Technological Innovations in Muscle Food Processing for Nutritional Security, Quality and Safety”	Department of LPT, Faculty of Veterinary and Animal Sciences, WBUAFS, Kolkata, W.B.	22 – 24 November, 2018 3 days
	XXVI Annual conference of IAAVR	Belgachia campus, WBUAFS, Kolkata	1–2 February, 2019 2 days

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Prof. G.D. Dash Professor& Head	ISEE National Seminar-2018 on “Integrated Farming System for Enhancing Farmers’ Income and Nutritional Security”	Belgachia campus, WBUAFS, Kolkata	5 – 7December, 2018 3 days
Prof. T.J. Abraham, Professor			
Sri P. Mali Asst. Professor	Seminar on “Importance of veterinary, dairy and fishery education in the present economic scenario of the country” during the 25 th Foundation day celebration of WBUAFS	Belgachia campus, WBUAFS, Kolkata	2 nd January, 2019 1 day

VIII.1.B.3. Department of Aquatic Environment Management

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/ s&Duration
Dr. Sangram Keshari Rout, Professor and Head	International Symposium and 8 th Conference of Indian Meat Science Association (IMSACON-VIII)	Belgachia campus, WBUAFS, Kolkata	22 – 24 November, 2018 3 days
	ISEE National Seminar – 2018 on Integrated Farming System for Enhancing Farmers’ Income and Nutritional Security	Belgachia campus, WBUAFS, Kolkata	5-7 December, 2018 3 days
	Seminar on Importance of Veterinary, dairy and Fishery education in the present economic scenario of the country.	Belgachia campus, WBUAFS, Kolkata	2 January, 2019 1 day

VIII.1.B.4. Department of Fishery Economics & Statistics

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Dr. Somen Sahu, Professor	International Symposium and 8 th Conference of Indian Meat Science Association (IMSACON-VIII)	Belgachia campus, WBUAFS, Kolkata	22 – 24 November, 2018 3 days
	ISEE National Seminar – 2018 on Integrated Farming System for Enhancing Farmers' Income and Nutritional Security	Belgachia campus, WBUAFS, Kolkata	5-7 December, 2018 3 days
	Seminar on Importance of Veterinary, dairy and Fishery education in the present economic scenario of the country.	Belgachia campus, WBUAFS, Kolkata	2 January, 2019 1 day

VIII.1.B.5. Department of Fishery Engineering

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Dr.N.A.Talwar, Professor	ISEE National Seminar – 2018 on Integrated Farming System for Enhancing Farmers' Income and Nutritional Security	Belgachia campus, WBUAFS, Kolkata	5-7 December, 2018 3 days
	Seminar on Importance of Veterinary, dairy and Fishery education in the present economic scenario of the country.	Belgachia campus, WBUAFS, Kolkata	2 January, 2019 1 day
	Seminar on “ 19 th Indian Veterinary Congress, XXVI Annual Conference of IAAVR and National Symposium”	Belgachia campus, WBUAFS, Kolkata	1-2 February 2019 2 days

VIII.1.B.6. Department of Fishery Extension

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
BiswarupSaha, Associate Professor	9th National Extension Education Congress-2018, organized by Society of Extension Education, Agra on “Climate Smart Agricultural Technologies : Innovations and Interventions”	CAPHET, Ranipool, Sikkim	15-17 November, 2018 3 days

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Smt. Moumita Ray (Sarkar) Assistant Professor	Training Programme on Concept Building and Basic Statistical Analysis for Inland Fisheries Management	CIFRI, Barrackpore	3-10August, 2018 8 days
BiswarupSaha, Associate Professor Smt. Moumita Ray (Sarkar) Assistant Professor	National Symposium on Innovative Process in Animal Health and Production for Safe and Secured Food under One Health Perspective Seminar on Importance on Veterinary, Dairy and Fishery education in the present economic scenario of the country	Belgachia campus, WBUAFS, Kolkata Belgachia campus, WBUAFS, Kolkata	1-2February, 2019 2 days 2January, 2019 1 day
Prof. S.S.Dana Professor BiswarupSaha, Associate Professor Smt. Moumita Ray (Sarkar) Assistant Professor	ISEE National Seminar-2018 on 'Integrated Farming System for Enhancing Farmers' Income and Nutritional Security'	Belgachia campus, WBUAFS, Kolkata	5-7 December, 2018 3 days

VIII.1.B.7. Department of Fish ProcessingTechnology

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Dr. K.C. Dora, Professor Dr. S. Chowdhury Associate Professor Mr. PrasantaMurmu Assistant Professor	International Symposium& 8 th Conference of Indian Meat Science Association (IMSACON-VIII) ISEE National Seminar 2018 on Integrated Farming System for Enhancing Farmers' Income and Nutritional Security Seminar on " Importance of Veterinary, Dairy and Fishery Education in the present economic scenario of the country"	Belgachia campus, WBUAFS, Kolkata Belgachia campus, WBUAFS, Kolkata Belgachia campus, WBUAFS, Kolkata	22 – 24 November, 2018 3 days 5-7 December, 2018 3 days 2January, 2019 1 day

VIII.1.B.8. Department of Fishery Resources Management

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Prof. Nagesh Talagunda Srinivasan, Professor Prof. Samarendra Behera, Professor	ISEE National Seminar-2018 on 'Integrated Farming System for Enhancing Farmers' Income and Nutritional Security'	Belgachia campus, WBUAFS, Kolkata	5-7 December, 2018 3 days
Prof. Nagesh Talagunda Srinivasan, Professor	Seminar on "Importance of Veterinary, Dairy and Fishery Education in the present Economic Scenario of the Country"	Belgachia campus, WBUAFS, Kolkata	2 January, 2019 1 day
	19 th Indian Veterinary Congress and XXVI Annual Conference of IAAVR and National Symposium on "Innovative Progress in Animal Health and production for Safe and Secured Food Under One Health Perspective"	Belgachia campus, WBUAFS, Kolkata	1-2 February, 2019 2 days
	Workshop on "Syllabus Revision and Academic Reformation in Higher Fisheries Education"	ICAR-CIFE, Mumbai	18-19 February, 2019 2 days

VIII.1.C. FACULTY OF DAIRY TECHNOLOGY

VIII.1.C.1. Department of Dairy Chemistry

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Prof. P.R. Ray, Professor	Seminar on "Importance of Veterinary, Fisheries and Dairy Education in the present economic scenario of the country"	Belgachia campus, WBUAFS, Kolkata	2 January, 2019 1 day
	National Seminar on "Industry oriented research in processing- An update and future strategies"	Faculty of Dairy Technology, WBUAFS, Mohanpur	22-23 February, 2019 2 days

VIII.1.C.2. Department of Dairy Engineering

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Kumaresh Halder, Assistant Professor	International Conference on “Agriculture and Allied Sciences: The Productivity, Food Security and Ecology”	Farmers’ Academy and Convention Centre, (Lake Hall, Kalyani) BCKV	13-14August, 2018 2 days
	Centre of Advanced Faculty Training on “Nano-Technological and Biochemical Techniques for assessing the quality and safety of Milk and Milk Products”	Dairy Chemistry Division , ICAR-NDRI, Karnal, Haryana	1-21 December, 2018 21 days
Dr. S. K. Bag, Professor	47 th Dairy Industry Conference, 2019	Samrat Ashok International Convention Centre, Patna	7-9February,2019 3 days
Dr. P. K. Roy , Associate Professor KumareshHalder, Assistant Professor	Seminar on “Importance of Veterinary,Fisheries and Dairy Education in the present economic scenario of the country”	Belgachia campus, WBUAFS, Kolkata	2January, 2019 1 day
Prof. S.K.Bag, Professor Dr. P.K.Roy, Associate Professor	ISEE National Seminar-2018 on ‘Integrated Farming System for Enhancing Farmers’ Income and Nutritional Security’	Belgachia campus, WBUAFS, Kolkata	5-7 December, 2018 3 days
Prof. S.K.Bag, Professor Prof. P. Maiti, Professor Dr. P. K. Roy , Associate Professor KumareshHalder, Assistant Professor	National Seminar on “Industry oriented research in processing- An update and future strategies”	Faculty of Dairy Technology, WBUAFS, Mohanpur	22-23 February, 2019 2 days

VIII.1.C.3. Department of Dairy Microbiology

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Dt. Lopamudra Halder Associate Professor Mr. Amit Kumar Barman Assistant Professor	International Conference on Agriculture and Allied Sciences: The Productivity, Food Security and Ecology-2018	BCKV Lake Hall (FACC), Kalyani, Nadia	13-14 August, 2018 2 days
Dr. Surajit Mandal, Professor	National Conference on “Challenges and Opportunities for the New Generation Dairy Foods in India”	College of Dairy Technology, Sri Venkateswara Veterinary University, Tirupati	9-10 September, 2018 2 days
	International Conference on ‘Rural Livelihood Improvement by Enhancing Farmers’ Income through Sustainable Innovation Agri and Allied Enterprises (RLISAAe)’	Birla Institute of Technology, Patna	30 October -1 November, 2018 3 days
Dr. Lopamudra Halder Associate Professor	International Symposium and 8 th Conference of Indian Meat Science Association (IMSACON VIII) - 2018 on Technological Innovations in Muscle Food Processing for Nutritional Security, Quality and Safety	Belgachia campus, WBUAFS, Kolkata	22 – 24 November, 2018 3 days
Dr. Surajit Mandal, Professor Dr. Lopamudra Halder Associate Professor	Gut Microbiota and Probiotic Science Foundation (India), 9th India Probiotic Symposium, “Probiotics through the lifespan”	Amity University, Kolkata	24 – 25 November, 2018 2 days
Dr. Surajit Mandal, Professor Dr. Lopamudra Halder Associate Professor Mr. Amit Kumar Barman Assistant Professor	ISEE National Seminar-2018 on ‘Integrated Farming System for Enhancing Farmers’ Income and Nutritional Security’	WBUAFS, Kolkata	5-7 December, 2018 3 days

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Mr. Amit Kumar Barman Assistant Professor	Seminar on “Importance of Veterinary, Fisheries and Dairy Education in the present economic scenario of the country”	WBUAFS, Kolkata	2 January, 2019 1 day
Dr. Lopamudra Halder Associate Professor	47th Dairy Industry Conference-2019, organized by Indian Dairy Association, (EZ)	Samrat Ashoke International Convention Centre , Patna	7-9 February, 2019 3 days

VIII.1.C.4. Department of Dairy Technology

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Mr. Goutam Kumar Das, Assistant Professor	Gut Microbiota and Probiotic Science Foundation (India), 9th India Probiotic Symposium, “Probiotics through the lifespan”	Amity University, Kolkata	24-25 November, 2018 2 days
Dr. Anindita Debnath, Assistant Professor	47th Dairy Industry Conference organised by Indian Dairy Association	Samrat Ashok International Convention Centre, Patna	7-9 February, 2019 3 days
Mr. Goutam Kumar Das, Assistant Professor			

VIII.1.D. DIRECTORATE OF RESEARCH, EXTENSION & FARMS

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Dr. B K Biswas, Scientist	International Symposium & 8 th Conference of Indian Meat Science Association (IMSACON-VIII)	Belgachia campus, WBUAFS, Kolkata	22 – 24 November, 2018 3 days
Dr. K C Dhara, Asstt. Dir (Farms)	ISEE National Seminar-2018 on ‘Integrated Farming System for Enhancing Farmers’ Income and Nutritional Security’	Belgachia campus, WBUAFS, Kolkata	5-7 December, 2018 3 days

Name of the faculty member with Designation	Title of Seminar, Symposium, Workshop, Training attended	Venue	Date/s&Duration
Dr. S. Das, Scientist	Training cum Workshop on AISHE	Hotel BNR, Ranchi	5 May, 2018 1 day
Dr. B K Biswas, Scientist Dr. K C Dhara, Asstt. Dir (Farms)	Seminar on “Importance of Veterinary, Dairy and Fishery Education in the present Economic Scenario of the Country”	Belgachia campus, WBUAFS, Kolkata	2 January, 2019 1 day
Dr. S. Das, Scientist Mrs. A Biswas, Computer Programmer	19 th Indian Veterinary Congress and XXVI Annual Conference of IAAVR and National Symposium on “Innovative Progress in Animal Health and production for Safe and Secured Food Under One Health Perspective”	Belgachia campus, WBUAFS, Kolkata	1-2February, 2019 2 days

VIII.2. ABROAD VISIT OF SCIENTISTS

Sl. No.	Name, Designation & Department	Institute/ Country visited	Purpose of Visit	Period of Visit	
				From	To
1.	Dr. Amlan Patra, Animal Nutrition	Free University Berlin, Germany	Humboldt Fellow	April 2017	
2.	Prof (Dr) Sarbani Hazra, Veterinary Surgery & Radiology	Minneapolis, USA	To attend and present paper in the Annual conference of American college of Veterinary Ophthalmologists (ACVO)	26/09/2018	29/09/2018
3.	Prof. S. K. Das, Professor, Dept. of Aquaculture	University of Washington, Seattle, USA	To attend and present in an International Conference	16/07/2018	20/07/2018
4.	Dr. G. Dash, Professor	Water Authority of Iran, Iran, Asia.	To attend “Workshop cum Training on Fish Diseases and Biosecurity in Aquaculture” as Key Resource Person from Water Authority of Iran and Consulting Firms M/S Siam and Pars.	23/08/2018	01/09/2018

VIII.3. HONOURS / AWARDS/ FELLOWSHIPS ETC. RECEIVED BY THE TEACHERS/ SCIENTISTS/ OFFICERS OF THE UNIVERSITY

Sl. No.	Name of the recipient	Honours / Awards/ Fellowships Etc. Received By The Teachers/ Scientists/ Officers Of The University	Offering organization	Field of remarkable activity
1	Dr. SanjoyDatta, Assistant Professor, Deptt of Animal Genetics & Breeding	Certificate of appreciation in recognition of outstanding contribution to the quality of the journal	International Journal of Livestock Research	Reviewer and Member, Scientific Advisory Board, IJLR
2	Dr. P.N.Chatterjee, Assistant Professor, Deptt of Animal Nutrition	University Best Teacher Award	WBUAFS, Kolkata	Best Teacher of University
		Best Teacher Award F/O. VAS	WBUAFS, Kolkata	Best Teacher of F/O. VAS
		Outstanding Presentation Award	Dept. of Science, Technology and Biotechnology, Govt. of West Bengal	Research
		Dr. RishendraVerma Young Scientist Award	Indian Association for Advancement of Veterinary Research, IVRI, Izatnagar	Research
		Best Oral Presentation Award	Animal Nutrition Association of India (BASU - Patna Chapter)	Research
3	Dr Santanu Bera Assistant Professor & Head, Deptt. Of Livestock Production Management	Member of Scientific Advisory Board	Indian Journal of Livestock Research	Contribution to quality of the journal

Sl. No.	Name of the recipient	Honours / Awards/ Fellowships Etc. Received By The Teachers/ Scientists/ Officers Of The University	Offering organization	Field of remarkable activity
4	Dr Nilotpal Ghosh Professor Dept of Livestock Production Management	Appointed External Adjunct Faculty BHU	Banaras Hindu University, Varanasi, Uttar Pradesh	
5	Prof.SubhasisBiswas, Professor & Head, Deptt of Livestock Products Technology	G.V. Narayankhedkar Memorial Award	19 th Indian Veterinary Congress and IAAVR	Contribution in veterinary education and research
6	Dr. P. Mukherjee, Assistant Professor Deptt. of Veterinary Clinical Complex	3 rd Presentation award	Indian Meat Science Association	Poster presentation
7	Prof. ChandanLodh, Professor, Deptt of Veterinary Medicine, Ethics &Jurisprudence	Borhringer-Gold Medal for Health Management in Canine Practice-2019	Indian Society for advancement of Canine Practice	Canine Health Management
8	Dr. S. N. Joardar, Professor, Depttt of Veterinary Microbiology	Elected Member of National Academy of Veterinary Sciences (I)	National Academy of Veterinary Sciences (I)	Veterinary Microbiology
		IAAVR Merit Award	Indian Association for the Advancement of Veterinary Research (IAAVR)	Veterinary Microbiology
		Personality of the Year (2018) Award	Reguerdon Inc., New Delhi	Veterinary Microbiology
		Biography in Asia Pacific Who's Who (2019)	Publisher-Rifacimento International, New Delhi	Veterinary Microbiology

Sl. No.	Name of the recipient	Honours / Awards/ Fellowships Etc. Received By The Teachers/ Scientists/ Officers Of The University	Offering organization	Field of remarkable activity
9	Dr. Indranil Samanta, Assistant Professor, Deptt of Veterinary Microbiology	Summer Research Fellowship-2018 (for teachers)	Indian Academy of Sciences-Indian National Science Academy-The National Academy of Sciences	Veterinary Microbiology
		Outstanding contribution in reviewing	Elsevier	Reviewing the research articles published in Elsevier Journals associated with Microbiology
		Best Oral Presentation Award	International symposium and 8 th Conference of Indian Meat Science Association at West Bengal University of Animal and Fishery Sciences	Veterinary Microbiology (Antimicrobial resistance)
		'P. Madhusudan Gold Medal' (2019)	Indian Association for the Advancement of Veterinary Research (IAAVR)	Veterinary Microbiology (Teaching and Research)
10	Dr. K Batabyal, Assistant Professor, Deptt of Veterinary Microbiology	3 rd Best Oral Presentation Award	International Symposium & 8 th Conference of Indian Meat Science Association (IMSACON – VIII), held at WBUAFS, Kolkata	Veterinary Microbiology (Antimicrobial resistance)
		2 nd Best Oral Presentation Award	National Symposium & 19 th Indian Veterinary Congress/XXVI Annual Conference of IAAVR, held at WBUAFS, Kol.	Veterinary Microbiology (Food intoxication)

Sl. No.	Name of the recipient	Honours / Awards/ Fellowships Etc. Received By The Teachers/ Scientists/ Officers Of The University	Offering organization	Field of remarkable activity
11	Dr. S. Baidya Associate Professor & Head, Deptt. Of Veterinary Parasitology	Dr. C. Natarajan Endowment Award (Gold Medal).	Association of Public Health Veterinarians in XIII Biannual National Conference of Association of Public Health Veterinarians & Symposium	For Best Paper Presentation Award on community Science in Veterinary Public Health, 2018.
12	Dr. S. Pandit, Assistant Professor, Deptt. Of Veterinary Parasitology	Outstanding Paper Presentation Award, Bidhannagar College, Kolkata, 18-19 th December, 2018	3 rd Regional Science and Technology Congress (Southern Region)-2018	Agriculture and Animal Sciences
13	Dr. S.K.Mukhopadhyay Professor, Deptt. Of Veterinary Pathology	CPCSEA Nominee, 2018	CPCSEA, Ministry of Environment, Forests & Climate Change, Govt. of India	CPCSEA
14	Dr. S. Mondal Assistant Professor, Deptt. Of Veterinary Pathology	CPCSEA Nominee, 2018	CPCSEA, Ministry of Environment, Forests & Climate Change, Govt. of India	CPCSEA
15	Dr. S. Pradhan Assistant Professor, Deptt. Of Veterinary Pathology	Certificate of Appreciation	By the ISEE, 2018	Veterinary Education & Extension
16	Dr. R.N. Hansda Assistant Professor, Deptt. Of Veterinary Pathology	Certificate of Appreciation	By the ISEE, 2018	Veterinary Education & Extension
17	Prof. Pradip Kumar Das, Professor & Head, Deptt. of Veterinary Physiology	Associate Editor	Indian Journal of Animal Health	Contribution towards teaching, research & extension in the field of Veterinary & Animal Husbandry

Sl. No.	Name of the recipient	Honours / Awards/ Fellowships Etc. Received By The Teachers/ Scientists/ Officers Of The University	Offering organization	Field of remarkable activity
18	Dr. Kinsuk Das Assistant Professor, Dept. of Veterinary Physiology	Senior Member	Hong Kong Chemical, Biological & Environmental Engineering Society	Nanomedicine
		Member	International Association of Advanced Materials, Sweden	Nanomedicine
19	Dr. Chanchal Debnath, Associate Professor, Deptt. Of Veterinary Public Health	Dr. R.R. Shukla Gold Medal Award for best paper presentation on “Zoonotic diseases of National importance and the control and Containment of such diseases in India” XIII Biennial National Conference of Association of Public Health Veterinarians held at CoVAS, G.B. Pant University of Agri. & Tech., Pantnagar-263145, Uttarakhand. .	Association of Public Health Veterinarians	Mycotic Zoonoses

Sl. No.	Name of the recipient	Honours / Awards/ Fellowships Etc. Received By The Teachers/ Scientists/ Officers Of The University	Offering organization	Field of remarkable activity
20	Prof. Samit Kumar Nandi, Professor & Head, Deptt. Of Veterinary Surgery & Radiology	Tata Innovation Fellowship 2018-19	Department of Biotechnology, Ministry of Science & Technology, Government of India, New Delhi	To recognize and reward scientists with outstanding track record in biological sciences to find innovative solutions to major problems in healthcare, agriculture and other areas related to life sciences and biotechnology.
		Fellow, 2019	Indian Association for the Advancement of Veterinary Research	Overall National & International outstanding contributions in the field of Veterinary Science & Animal Husbandry.
21	Prof. S. K. Das, Professor, Dept. of Aquaculture	Best Teacher Gold Medal Award, Faculty of Fishery Sciences	West Bengal University of Animal and Fishery Sciences, Kolkata	Teaching and Research
		Recognition Award	Indian Society of Extension Education	Growth and development of Extension Education
22	Dr. T. J. Abraham, Professor, Dept. of Aquatic Animal Health	Aquatic Animal Health Specialist” under the Broad Subject Matter Area (BSMA) Committee	ICAR, New Delhi.	Fisheries Sciences to develop/ revise syllabi for the courses of masters and PhD degree in “Aquatic Animal Health”
23	Sri Prasenjit Mali, Assistant Professor	3 rd Prize for best oral presentation in International Symposium and 8 th Conference of Indian Meat Science Association (IMSACON-VIII)	Department of LPT, Faculty of Veterinary and Animal Sciences, WBUAFS, Kolkata,	Technological innovations in muscle food processing for nutritional security, quality and safety.

Sl. No.	Name of the recipient	Honours / Awards/ Fellowships Etc. Received By The Teachers/ Scientists/ Officers Of The University	Offering organization	Field of remarkable activity
24	Dr. Biswarup Saha, Associate Professor, Deptt. of Fishery Extension	Recipient of Young Scientist Award in December, 2018 at 9th National Extension Education Congress-2018	Society of Extension Education, Agra on “Climate Smart Agricultural Technologies : Innovations and Interventions” held at CAPHET, Ranipool, Sikkim.	Extension Education
		Recipient of prestigious O.P. Dahma award for outstanding contribution in Extension education and research	Indian Society of Extension Education, Indian Agricultural Research Institute, New Delhi.	Extension Education
		Recipient of prestigious ISEE Recognition award for outstanding contribution in the fields of Extension Education	Indian Society of Extension Education, Indian Agricultural Research Institute, New Delhi.	Extension Education
25	Mr. PrasantaMurmu Assistant Professor	Best Oral Presentation Award (3 rd) in International Symposium & 8 th Conference of Indian Meat Science Association (IMSACON-VIII)	Indian Meat Science Association	Best Oral Presentation (3 rd) for “Fish filleting waste use as a potential source of protein”

Sl. No.	Name of the recipient	Honours / Awards/ Fellowships Etc. Received By The Teachers/ Scientists/ Officers Of The University	Offering organization	Field of remarkable activity
26	L. Halder, S. K. Bag and T. Maity	Best Poster presentation award	Indian dairy Association, New Delhi.	Innovative and Sustainable Strategies for augmenting Dairy Farmers Income through Backward and Forward Linkage
27	S Banerjee, H Singh and S K Bag, Professor, Dept. of Dairy Engineering	Third Prize in Poster presentation	Indian dairy Association, New Delhi.	Milk Processing and new Generation Value Added Milk Products
28	Kumaresh Halder, Assistant Professor, Dept. of Dairy Engineering	Best Oral Presentation Award	Jointly by KrishiSanskriti and BCKV	Oral Presentation in <i>International Conference on Agriculture and Allied Sciences on 'Crystallization Kinetics of Milk Fat and Its Role in Country Butter Making'</i>
29	Prof. Surajit Mandal, Professor, Dept. of Dairy Microbiology	Best Oral Presentation Award	College of Dairy Technology, Sri Venkateswara Veterinary University, Tirupati (Andhra Pradesh)	Oral Presentation in <i>National Conference on "Challenges and Opportunities for the New Generation Dairy Foods in India"</i> , on 'Bioprocess for stable and active probiotic <i>Lactobacillus</i> spp.'

Sl. No.	Name of the recipient	Honours / Awards/ Fellowships Etc. Received By The Teachers/ Scientists/ Officers Of The University	Offering organization	Field of remarkable activity
30	Dr. Lopamudra Haldar Associate Professor, Dept. of Dairy Microbiology	Best Oral Presentation Award (1 st)	Jointly by KrishiSanskriti and BCKV	Oral Presentation in <i>International Conference on Agriculture and Allied Sciences</i> on ‘Efficacy of Probiotic <i>Bacillus coagulans</i> for production of milk based dried formulae’
		Best Oral Presentation Award (3 rd)	Indian Meat Science Association	Oral Presentation in <i>IMSACON VIII-2018</i> , on ‘Prevalence of Antibiotic Resistant Coliform Organisms in Market Sarpuria, a Geographical Indication Sweetmeat of West Bengal, India’
		Invited Guest Speaker for Women in Agriculture Day in India on December, 4, 2018	ICAR-CIFRI, Barrackpore, Kolkata	
		Best Paper Award	Indian Society of Extension Education	Oral Presentation in <i>ISEE National Seminar-2018</i> on “Skilled training on value added milk products’ business: A way forward for income enhancement of the dairy farmers”
		Best Poster Presentation Award (1 st)	Indian Dairy Association (EZ)	Poster Presentation in <i>47th Dairy Industry Conference-2019</i> , on ‘Skill Development for Milk Based Entrepreneurship: A Way Forward for Transforming Livelihood onto a Path of Prosperity’

Sl. No.	Name of the recipient	Honours / Awards/ Fellowships Etc. Received By The Teachers/ Scientists/ Officers Of The University	Offering organization	Field of remarkable activity
31	Mr. Amit Kumar Barman Assistant Professor Dept. of Dairy Microbiology	Best Paper Award	Jointly by KrishiSanskriti and BCKV	Oral Presentation in <i>International Conference on Agriculture and Allied Sciences-20-19</i> , on “Comparative Study On The Shelf Life Of Treated Paneer ”
32	Dr. AninditaDebnath Assistant Professor Dept. of Dairy Technology	Best Paper publication in Indian Dairyman	Indian Dairyman	Paper publication
		Second best paper award for “ Sensory and colour profile of milk-coconut sweet as a function of ingredients” published in Indian Journal of Dairy Science.	Indian Dairy Association	Paper presentation
		Secured third position in poster presentation on “Rheological property of Inulin added low and reduced fat cream cheese” in 47th Dairy Industry Conference organised by Indian Dairy Association	Indian Dairy Association	Paper presentation

IX. DETAILS OF PUBLICATION OF BOOK, BOOKLETS, LEAFLETS, MANUAL ETC. BY DIFFERENT UNITS :

IX.1. FACULTY OF VETERINARY & ANIMAL SCIENCES

IX.1.1. Department of Animal Genetics & Breeding

Name of book, booklets, Handout, report, manuals etc.	Category of Item published	Author / Co-Author (s)	Date/Year of publication with details
Practical manual on Animal Genetics & Breeding Paper I & II	Manual	Prof. P K Senapati, Prof. A K Sahoo, Dr. S Taraphder, Dr. M. Roy, Dr. U Sarkar, Dr. A K Das, and Dr. S Datta	2018
‘Cattle and Buffalo Genetic Resources in India’	Book	Subhas Taraphder, Ajit Kumar Sahoo & Rajesh Paul	2018

IX.1.2. Department of Livestock Farm Complex

Name of book, booklets, Handout, report, manuals etc.	Category of Item published	Author / Co-Author (s)	Date/Year of publication with details
“Rice cake –an alternative feed resource for cattle and broiler chicken”	Book	Manik Chandra Pakhira, Purnendu Biswas	Lambert Academic Publishing ISBN:978-613-9-95058-4 30.11.2018

IX.1.3. Department of Livestock Production Management

Name of book, booklets, Handout, report, manuals etc.	Category of Item published	Author / Co-Author (s)	Date/Year of publication with details
Package of Practices for rearing of Black Bengal Goat	Booklet	Dr M Roy, Dr U Sarkar, Dr M C Pakhira, Dr S Bera, Dr G Patra, Dr S Pandit	2018-19
Black Bengal Goat	Breed Monograph	Dr M Roy, Dr U Sarkar, Dr M C Pakhira, Dr S Bera, Dr G Patra, Dr S Pandit	2018-19

Name of book, booklets, Handout, report, manuals etc.	Category of Item published	Author / Co-Author (s)	Date/Year of publication with details
Scientific Management of Kids (feeding of milk substitute)	Leaflet	Dr M Roy, Dr U Sarkar, Dr M C Pakhira, Dr S Bera, Dr G Patra, Dr S Pandit	2018-19
Season wise care and management of goats	Leaflet	Dr M Roy, Dr U Sarkar, Dr M C Pakhira, Dr S Bera, Dr G Patra, Dr S Pandit	2018-19
Parasitic disease of goat and their treatment	Leaflet	Dr M Roy, Dr U Sarkar, Dr M C Pakhira, Dr S Bera, Dr G Patra, Dr S Pandit	2018-19
Summer management of Bovine (in bengali)	Leaflet	Santanu Bera	March, 2019

IX.1.4. Department of Veterinary Bio-Chemistry

Name of book, booklets, Handout, report, manuals etc.	Category of Item published	Author / Co-Author (s)	Date/Year of publication with details
Practical Manual	Veterinary Biochemistry Paper I	Dr. A Maity Dr. S Batabyal Dr. S Chattopadhyay Dr. SS Kesh	2018 70 pages
Practical Manual	Veterinary Biochemistry Paper II	Dr. A Maity Dr. S Batabyal Dr. S Chattopadhyay Dr. S S Kesh	2018 40 pages

IX.1.5. Department of Veterinary Clinical Complex

Name of book, booklets, Handout, report, manuals etc.	Category of Item published	Author / Co-Author (s)	Date/Year of publication with details
Book Chapter: Organic-inorganic micro/nanofiber composites for biomedical applications, In: Materials for Biomedical Engineering: Biopolymer Fibers	Book Chapter	Nandi S.K., Mahato A., B. Kundu, P. Mukherjee	Elsevier Science Jan. 2019, pp 21-44

Name of book, booklets, Handout, report, manuals etc.	Category of Item published	Author / Co-Author (s)	Date/Year of publication with details
Veterinary laboratory diagnosis	Book	M. Mondal	Narendra publishing house, Delhi, 2019, ISBN: 978-93-87590-74-8

IX.1.6. Department of Veterinary Gynaecology & Obstetrics

Name of book, booklets, Handout, report, manuals etc.	Category of Item published	Author / Co-Author (s)	Date/Year of publication with details
Practical manual on Veterinary Gynaecology & Obstetrics - (Course No VOG-411)	Manual	S. Basu, Mrs. K. Ray, P.R. Nandi	
Practical manual on Veterinary Obstetrics (Course No VOG-421)	Manual	S. Basu, , Mrs. K. Ray, P.R. Nandi	
Practical manual on Veterinary Andrology and AI (Course No VOG- 511)	Manual	S. Basu, , Mrs. K. Ray, P.R. Nandi	
Role of Some epididymal Bio-molecules in maturation of pig	Book	Somraj Chattaraj, Siddhartha Basu and Kalyani Ray (Co-Authors)	2018 ISBN- 978-620-2-31430-5 13: 978-6202095648 PAGE-179

IX.1.7. Department of Veterinary Microbiology

Name of book, booklets, Handout, report, manuals etc.	Category of Item published	Author / Co-Author (s)	Date/Year of publication with details
Veterinary Immunology for Beginners	Text book	Dr. S. N.Joardar	2018
Annual Report of Bluetongue scheme (AINP-BT)	Annual Report	Dr. S. N.Joardar	2018
Annual Report of DBT (Biofilm) scheme	Annual Report	Dr. S. N.Joardar	2018

Name of book, booklets, Handout, report, manuals etc.	Category of Item published	Author / Co-Author (s)	Date/Year of publication with details
'Biosecurity strategies for backyard poultry: A controlled way for safe food production' (2018) in volume 16 (Food Control and Biosecurity) of 'Handbook of Food Bioengineering', edited by Alina Maria Holban, Alexandru Mihai Grumezescu	Book Chapter	Indranil Samanta, Siddhartha Narayan Joardar, Pradip Kumar Das	Academic Press (Elsevier) 2018
'Part V: Microbiology' in 1 st Edition of Veterinary Laboratory Diagnosis by Mrityunjay Mondal	Book Chapter	Kunal Batabyal	NPH, New Delhi 2019 Pp 217-264

IX.1.8. Department of Veterinary Physiology

Name of book, booklets, Handout, report, manuals etc.	Category of Item published	Author / Co-Author (s)	Date/Year of publication with details
Biosecurity Strategies for Backyard Poultry: A Controlled Way for Safe Food Production. In Food Control and Biosecurity	Chapter of Book	Dr. I. Samanta, Dr. S.N. Joardar and Dr. P.K. Das	2018, Academic Press, Elsevier, The Netherlands (pp. 481-517)

IX.1.9. Department of Veterinary Public Health

Name of book, booklets, Handout, report, manuals etc.	Category of Item published	Author / Co-Author (s)	Date/Year of publication with details
'Biosecurity strategies for backyard poultry: A controlled way for safe food production' (2018) in volume 16 (Food Control and Biosecurity) of 'Handbook of Food Bioengineering', edited by Alina Maria Holban, Alexandru Mihai Grumezescu	Book chapter	Indranil Samanta, Siddhartha Narayan Joardar, Pradip Kumar Das	Academic Press (Elsevier)

IX.1.10. Department of Veterinary Surgery & Radiology

Name of book, booklets, Handout, report, manuals etc.	Category of Item published	Author / Co-Author (s)	Date/Year of publication with details
Organic-inorganic micro/nano fibre composites for biomedical applications.. In Book “Materials for Biomedical Engineering: Biopolymer Fibers”.	In Book “Materials for Biomedical Engineering: Biopolymer Fibers” Elsevier	Samit Kumar Nandi, Arnab Mahato, Biswanath Kundu and Preasenjit Mukherjee.	2019 4: 21-44.
Clinical application of biomimetic marine-derived materials for tissue engineering.	Book on “Marine-Derived Biomaterials for Tissue Engineering Applications” Springer Nature	Lalzawmliana V, Prasenjit Mukherjee, Biswanath Kundu and Samit Kumar Nandi.	2019 Chapter DOI 10.1007/978-981-13-8855-2_15 Page 1-27

IX.2. FACULTY OF FISHERY SCIENCES

IX.2.1. Department of Fishery Extension

Name of book, booklets, Handout, report, manuals etc.	Category of Item published	Author / Co-Author (s)	Date/Year of publication with details
Project Management : Premises, Principles and Practices	Book	BiswarupSaha S.K.Acharya RitiChatterjee	ISBN- 978-93-95822-78-0 January, 2019
Souvenir of ISEE Natioanl Seminar-2018 on ‘Integrated Farming System for Enhancing Farmers’ Income and Nutritional Security’	Souvenir	S.S.Dana BiswarupSaha S.K.Das Baldeo Singh	5 th December, 2018
Extension literature Published as lead paper entitled ‘Socio-cultural and economical consideration in Introducing Fish based Integrated Farming System for Livelihood vis-à-vis Nutritional Security ’ in the Souvenir of ISEE Natioanl Seminar-2018 on ‘Integrated Farming System for Enhancing Farmers’ Income and Nutritional Security’	Souvenir	BiswarupSaha	5 th December, 2018 Pg. No. 163-170

IX.2.2. Department of Fish Processing Technology

Name of book, booklets, Handout, report, manuals etc.	Category of Item published	Author / Co-Author (s)	Date/Year of publication with details
Chapter in a book : Fish Preservation by eco-friendly solar drier	Book	Shiv Mohan Singh, S. Nath, S. Chowdhury and K.C. Dora	Organic Farming for Sustainable Agriculture and Horticulture. Ed. P.K. Ojha, A. Kumar, Arun Kumar Singh and P. Mishra. Biotech Books, New Delhi, pp. 197-208.2019
Recent advances in fish processing technology	Training manual	Supratim Chowdhury	Aquaclinics and Aquapreneurship Development. ICAR-CIFE training manual. 26 th February to 25 th March 2019. pp. 176-180. 2019

IX.3. FACULTY OF DAIRY TECHNOLOGY

IX.3.1. Department of Dairy Technology

Name of book, booklets, Handout, report, manuals etc.	Category of Item published	Author / Co-Author (s)	Date/Year of publication with details
Chapter entitled “ Advances in cheese technology ” in “Recent technologies in dairy science”	Book chapter	Author: Anindita Debnath Co-author: Jui Lodh and Bhopal Singh Editor: Rekha Rani, Bhopal Singh, Chetan N Dharaiya, Hanslal and Arghya Mani	Publication year: 2019 Page no. 363-388 Publisher: Today and Tomorrow's Printers and Publishers

IX.4. DIRECTORATE OF RESEARCH, EXTENSION & FARMS

Name of book, booklets, Handout, report, manuals etc.	Category of Item published	Author / Co-Author (s)	Date/Year of publication with details
University Newsletter	Newsletter	Directorate of Research, Extension & Farms	April 2018 - March, 2019
Annual Report	Annual Report	Directorate of Research, Extension & Farms	March, 2019
Matsya-o-Prani Palan	Farm Journal in Bengali	Directorate of Research, Extension & Farms	2018

X. CENTRAL INSTRUMENTATION FACILITIES & CLINICS

West Bengal University of Animal & Fishery Sciences had received a fund from the Indian Council of Agricultural Research (ICAR), New Delhi under 'Establishment of Central Instrumentation Facility' during 11th five year plan. Utilizing that fund the University has strengthened its Central Instrumentation facilities in its faculties. Several valuable scientific equipments have been procured out of the fund received from several funding agencies such as, Government of India, ICAR, State Government etc. The present status of such equipments / instruments are furnished below -

List of Valuable Equipments under the Central Instrumentation Facility :

A. Faculty of Veterinary & Animal Sciences

Sl.No.	Equipments
1	8 TPL Lab Model Torque Twin Screw Centrifuge
2	Electron capture detector
3	Inverted Tissue Culture (Sigma)
4	Inverted Trinocular
5	ECD with Electrometer
6	Low Pressure Chromatography System
7	HP Proliant Server : Web & Mail Server
8	UV – VIS Spectrophotometer
9	Ultra Pure Water Purification System (Animal Nutrition Dept.)
10	ELISA Reader (Vet. Physiology & VEPM)
11	PCR Thermocycler
12	Gel Doc System
13	Electrophoresis System
14	Inverted Microscope, Steriozoom Microscope and Fluorescence Microscope with Photographic attachment
15	Fluorescence Spectrophotometer
16	HPLC Unit (Vety. Biochemistry)
17	Rotary Microtome (Vety. Pathology)
18	Trinocular Research Microscope (Vety. Anatomy)

B. Faculty of Fishery Sciences

Sl.No.	Equipments
1	High Performance Liquid Chromatography
2	Analytical Balance
3	Modular Laboratory
4	Atomic Absorption Spectrophotometer
5	Water purification system
6	Carbon di-oxide Incubator
7	Microfuge
8	Thermal cycler
9	Microblock Digestion system
10	U-V Trans-illuminator
11	Air purifier/curtain
12	Gas chromatograph
13	Inverted Microscope
14	Deep freeze
15	Generator
16	Canning Machine

C. Faculty of Dairy Technology

Sl. No.	Equipments
1	Protein Analyzer
2	Infra red Analyzer
3	Ice Cream Plant
4	Condensing Unit
5	Drying Unit
6	Moisture Analyzer
7	Gel Filtration
8	Rheometer
9	BOD Analyzer
10	PCR
11	Vacuum Milk Concentrator

VETERINARY CLINICS

Veterinary Clinics under WBUAFS deals with the diagnosis and treatment of sick animals in and around Kolkata as well as the Mohanpur Campus.

Working hour of the Units :

Belgachia Unit :

OPD	:	Monday to Friday – 8:00 AM to 2:00 PM
Extended OPD	:	Monday to Friday – 2:00 PM to 8:00 PM
Emergency service	:	Monday to Friday 8:00 PM to 8:00 AM (Next day) Saturday, Sunday & Govt. Holidays 24 Hours

Mohanpur Unit :

Out patient treatment :	Monday to Friday: 10am to 2.30 pm and
Emergency patient treatment	10 am to 5.30pm
Saturday :	OPD Hours



Fig 10.1: Outdoor of Veterinary Clinics at Belgachia

Services provided by the Units :

BelgachiaUnit :

1. Specialized treatment for Medicine, Surgery and Gynaecological cases
2. Major and Minor Surgery
3. Digital X-Ray, ECG and USG, Physiotherapy etc.
4. All types of diagnostic
5. Burial of carcasses
6. CCU
7. Blood transmission and Dialysis

MohanpurUnit :

1. Routine medical treatment and immunization for pet animals and farm animals.
2. Routine surgeries for animals.
3. Routine gynecological treatment for animals.
4. Various obstetrical surgeries for animals.
5. Artificial Insemination for cattle.
6. Diagnostic facilities such as X-Ray, USG, Endoscopy, ECG for animals.
7. ABC programme for different scientific institutes and NGO.
8. Stem cell transplantation facility to the pet animals both at Belgachia and Mohanpur Clinics. It is done for the first time in India.
9. Routine hematological, biochemical, pathological and microscopical exam facility for animals.
10. Routine blood transfusion facility for canines.

Examinations undertaken at both the Units :

Sl. No.	Name of Examination / Activity
1	X-Ray
2	ECG
3	Antibiotic Sensitivity Teat
4	ARV
5	USG (Whole Abdomen /Cranial Abdomen/ Caudal Abdomen)
6	Ultra Sound Therapy
7	Blood, Urine and Stool Examination
8	Skin Test
9	Oxygen
10	Canine Distemper
11	Castration by close method
12	Major/Minor Operation (Dog)
13	Major/Minor Operation (Cat)
14	Major/Minor Operation(Sheep)
15	Major/Minor Operation (Bird)
16	Major/Minor Operation (Cow)
17	Major/Minor Operation (Buffalo)
18	Major/Minor Operation (Monkey)
19	Dressing Major & Minor
20	Physiotherapy
21	All Health Certificate

RATE CHART (Diagonostic):

SL NO.	HAEMATOBIOCHEMICAL TEST	BELGACHIA	MOHANPUR	Other
			Exotic / non Mongrel Dog	
1.	CBC (Hb, TLC, DLC, TPC, PCV)	500.00	500.00	250.00
2.	Complete Haemogram (Hb, TEC, TLC, DLC, PCV, ESR, TPC, MCV, MC, HC)	600.00	600.00	300.00
3.	Hb, TLC, DLC	250.00	250.00	125.00
4.	Hb, TLC, DLC, ESR	300.00	300.00	150.00
5.	Hemoglobin	100.00	100.00	50.00
6.	TLC	100.00	100.00	50.00
7.	TEC	100.00	100.00	50.00
8.	DLC	100.00	100.00	50.00
9.	PCV	100.00	100.00	50.00
10.	ESR	100.00	100.00	50.00
11.	Platelet Count	100.00	100.00	50.00
12.	MCV	100.00	100.00	50.00
13.	MCH	100.00	100.00	50.00
14.	MCHC	100.00	100.00	50.00
15.	LFT (Total Bill, Direct Bill, TP, ALB, AST, ALT, ALP)	700.00	700.00	350.00
16.	TP	100.00	100.00	50.00
17.	ALB	100.00	100.00	50.00
18.	Bill (T+D)	200.00	200.00	100.00
19.	AST	150.00	150.00	75.00
20.	ALT	150.00	150.00	75.00
21.	ALP	150.00	150.00	75.00
22.	KFT	400.00	400.00	200.00
23.	URIC ACID	100.00	100.00	50.00
24.	PLASMA GLUCOSE	100.00	100.00	50.00
25.	CREATININE	100.00	100.00	50.00
26.	BUN	100.00	100.00	50.00
27.	LIPID PROFILE	700.00	700.00	350.00
28.	TOTAL CHOLESTEROL	200.00	200.00	100.00
29.	TRIGLYCERIDE	300.00	300.00	150.00
30.	HDL CHOL.	200.00	200.00	100.00
31.	LDL CHOL.	400.00	400.00	200.00
32.	VLDL CHOL	200.00	200.00	100.00
33.	CHOL HDL	400.00	400.00	200.00
34.	TOTAL ELECTRO (Na+, K+, Cl-)	400.00	400.00	200.00
35.	Na	150.00	150.00	75.00
36.	K	150.00	150.00	75.00
37.	Cl	150.00	150.00	75.00
38.	Ca	200.00	200.00	75.00
39.	Mg	300.00	300.00	150.00
40.	PO4	200.00	200.00	100.00
41.	LDH	300.00	300.00	150.00
42.	Haemo Protozoa	100.00 / 50.00	100.00 / 50.00	30.00
43.	Faecal	50.00 / 25.00	50.00 / 25.00	15.00

Belgachia unit :

A) OPD REGISTRATION CHARGES:

Sl.No	Animals	Existing charges
1.	Dog	50.00
2.	Cat	50.00
3.	Cattle/ Buffalo/ Monkey	50.00
4.	Exotic / Game bird	50.00
5.	Horse, Donkey, Mule	50.00
6.	Bird(Poultry/Duck/Turkey/Quail/ Non Pet Bird)	10.00
7.	Goat/ Sheep/Pig	10.00
8.	Rabbit/ Guinea pig/ Squirrel/ Rat/ Mongoose	10.00

B) OT CHARGES:

SI No.	Animals	Category	Exisiting charges
1.	Dog	Major	1500.00
		Minor	750.00
2.	Cat	Major	600.00
		Minor	300.00
3.	Goat/ Sheep	Major	200.00
		Minor	200.00
4.	Cow/ Buffalo/ Monkey	Major	1,000.00
		Minor	500.00
5.	Rabbit	Major	100.00
		Minor	50.00
6.	Equine	Major	2000.00
		Minor	1000.00

C) DRESSING CHARGES:

Animals	Types	Existing Charges
Any Species	Major	100.00
	Minor	50.00

CASTRATION CHARGES BY CLOSED METHOD : Rs. 20.00

HEALTH CERTIFICATE CHARGES : Rs. 100.00

Mohanpur unit :

A) OPD REGISTRATION CHARGES:

Sl.No	Animals	Existing charges
1.	Dog (Mongrel)	15.00
2.	Dog (Non Mongrel)	30.00
3.	Cattle	10.00
4.	Goat & Sheep	5.00
5.	Pig	5.00
6.	Bird	5.00
7.	Cat	10.00
8.	Monkey	15.00
9.	Rabbit, Guinea pig, Mongoose, Squirrel, Rat	5.00
10.	Horse, Donkey, Mule	25.00
11.	Exotic / game bird	50.00

B) OPERATION CHARGES:

Sl No.	Animals	Category	Existing charges
1.	Cat	Major	250.00
		Minor	100.00
2.	Cow/ buffalo	Major	300.00
		Minor	150.00
3.	Goat/ Sheep	Major	50.00
		Minor	25.00
4.	Equine	Major	1,000.00
		Minor	500.00
5.	Rabbit	Major	50.00
		Minor	25.00
6.	Dog (Mongrel)	Major	625.00
		Minor	325.00
7.	Dog(Non Mongrel)	Major	1,000.00
		Minor	500.00

C) DRESSING CHARGES:

Animals	Types	Existing Charges
Exotic /Non mongrel Dog	Major	100.00
	Minor	50.00
Any Species	Major	50.00
	Minor	25.00

D) SOUNDNESS & HEALTH CERTIFICATE:

Animals	Existing Charges (Rs.)
Exotic /Non mongrel Dog	100.00
Any Species	50.00

E) A .I. IN COW:

EXISTING CHARGES (Rs.)
35.00

F) HAEMOPROTOZOAN SCREENING:

Species	Rate(in Rs.)	
Dog	Exotic / non-mongrel dog	Other
	100.00	50.00
Other		30.00

G) FAECAL SAMPLE EXAMINATION:

Species	Rate(in Rs.)	
Dog	Exotic / non-mongrel dog	Other
	50.00	25.00
Other		15.00

H) CASTRATION BY CLOSED METHOD:

CASTRATION BY CLOSED METHOD	Rate(in Rs.)
	10.00

Rate chart of ECG for PET Animals:

SL NO.	Service	Rate(in Rs.)
1.	ECG for pet animals	150.00

Rate of service charges for the dept. VCC:

SL NO.	Name of the Test	Rate
1.	Antibiotic Sensitivity Test	Rs. 200.00 clinical sample
2.	Identification of Bacteria (Bio-chemical test)	Rs. 1,000.00 per sample
3.	Serological Test for diagnosis of Brucella	Rs. 50.00 per sample
4.	Serological Test for diagnosis of Salmonella	Rs. 50.00 per sample

Rate chart for X-ray and USG under the dept VCC:

A	USG	Mohanpur	
		Exotic / Non-mongrel dog (Rs.)	Others (Rs.)
1.	Whole abdomen	700.00	350.00
2.	Cranial	400.00	200.00
	Abdomen		
3.	Caudal abdomen	400	200.00
B	X-Ray	Manual X ray Belgachia TVCC (only report will be given, Processed film will be retained by the dept.) (inRs.)	Manual X ray Mohanpur TVCC (only report will be given, Processed film will be retained by the dept.) (inRs.)
1	Dog (mongrel)	120.00	60.00
2	Dog(non mongrel)	120.00	120.00
3	Cattle	120.00	60.00
4	Goat & sheep	120.00	60.00
5	Pig	120.00	60.00
6	Bird	120.00	60.00
7	Cat	120.00	60.00
8	Monkey	120.00	60.00
9	Rabbit, guinea pig, Mongoose, squirrel, rat	120.00	60.00
10	Horse, donkey, mule	120.00	60.00
11	Exotic /game Bird	120.00	120.00

Belgachia Unit :

Patients treated during the reporting period (Species wise) :

Sl. No.	Species	Cases
1	Dog	19337
2	Cat	3324
3	Goat	1255
4	Rabbit	1378
5	Bird	1320
6	Cow	156
7	Others	189
Total		26959
Summary of cases		
Medicinal Case		19046
Surgical Cases		6589
Gynecological Cases		1324

Pathological samples examined during the reporting period :

Sl. No.	Pathological sample	Number of samples
1	Stool	81
2	Blood	2546
3	Urine	7
4	Antibiotic sensitivity test	39
5	Skin	70

Other examinations undertaken during the reporting period:

Sl. No.	Examination	Number
1	USG	71
2	X-Ray	3074
3	ECG	38
4	Others / Physiotherapy	4

No. of vaccination done during the reporting period:

Sl. No.	Examination	Number
1	ARV	1709
2	Canine Distemper	1438
3	CRP	18
4	Anti Venom	1

Postmortem carried out during the reporting period: Nil

Carcasses buried in the University Burial Ground :761

Revenue generated during the reporting period: Rs. 74,75,576/-

Mohanpur Unit :

1. Species wise number of cases treated during the reporting period:

Name of Species	Surgical	Medicine	Gynecology
Cattle/ Buffalo	50	234	64
Sheep/ Goat	215	556	45
Dog	491	1,482	136
Cat	107	189	35
Others	52	170	07
Total	915	2,631	287

2. Number of Pathological samples examined during the reporting period:

Stool	2047
Blood	27
Urine	15
Total	2,089

3. Other Examinations done during the reporting period:

USG	26
X-Ray	473
Others/Endoscopy	8
Total	507

4. No. of vaccination done during the reporting period:

ARV	124
Canine distemper	45
Others, if any	
(I) FMD	390
(II) PPR	600
(III) R2B	300
TOTAL	1,459 doses

5. No. of postmortem done during the reporting period: Nil

6. No. of carcasses buried in the University Burial Ground: Nil

7. Revenue generated during the reporting period:

Month	Amount
April'2018	25,910.00
May'2018	23,860.00
June'2018	23,860.00
July'2018	36,075.00
August'2018	30,865.00
September'2018	23,220.00
October'2018	19,695.00
November'2018	19,035.00
December'2018	28,795.00
January'2019	29,200.00
February'2019	28,185.00
March'2019	32,545.00
TOTAL	3,21,245.00



Fig 10.2: Surgery performed in the OT of Veterinary Clinics, Belgachia



Fig 10.3: Canine Blood transfusion at Clinics

XI. CENTRAL LIBRARY AND INFORMATION NETWORK SERVICES (CLINS)



Library is an integral part of an institution of higher education. The prime necessity of university is to have a library with balanced and adequate collection which can satisfy the needs of the university faculties, research scholars & students and helps to promote advanced study and research programme. A well stocked university library serves as an invaluable resource in the conservation of knowledge and ideas and as an active force in the teaching, research and extension programmes of the university through direct assistance to the faculty members, research scholars & students at the right time, exhaustively and expeditiously. It is characterized by the profusion of information sources which ensures potential learning environment at the university.



XI.1. Library timings and usages

Library Hours:

On working days the services of the following sections of all the Libraries of the different campuses remain open as per following schedule:

	Central Library, Belgachia	Library, F/VAS, Mohanpur	Library, F/DT, Mohanpur	Library, F/FSc, Chakgaria
Working hours	10 AM - 5.30 PM (Server room upto 7.00 PM)	10 AM - 7.00 PM	10 AM – 5.30 PM	10 AM – 5.30 PM

XI.2. Summary of Facilities Available in the Libraries in the different campuses of WBUAFS:

Facilities	Central Li- brary, Belga- chia	Library, F/ VAS, Mohan- pur	Library, F/DT, Mohanpur	Library, F/ FSc, Chak- garia
Reference Service	Yes	Yes	Yes	Yes
Online Public Access Cataloguing (OPAC)	Yes (Through KOHA & SOUL 2.0)	Yes (Through KOHA & SOUL 2.0)	Yes (Through KOHA & SOUL 2.0)	Yes (Through KOHA & SOUL 2.0)
User education service, Inter Li- brary Loan service	Yes	Yes	Yes	Yes
Printing Facilities to the library us- ers	Yes	Yes	Yes	-
Resource sharing through Docu- ment Delivery Service (DDR)	Yes	Yes	Yes	Yes
e-books (EBSCO) and e-journals access	Yes	Yes (Through Re- moteXS)	Yes (Through Re- moteXS)	Yes (Through Re- moteXS)
Access to Consortium for e-Re- sources in Agriculture(CeRA) by ICAR.	Yes	Yes (Through Re- moteXS)	Yes (Through Re- moteXS)	Yes (Through Re- moteXS)
Book Bank	-	Yes	-	-
Internet facility	Yes (1 GBPS bandwidth, from NKN)	Yes (Alliance Broadband)	Yes (Alliance Broad- band)	Yes (Alliance Broadband)
Wi-Fi facility	Yes	Yes	Yes	Yes
Photocopy facility	-	Yes	Yes	Yes
Electronic ID card for Library Ser- vices users and University staff.	Yes	Yes	Yes	Yes

XI.3. Information on Books/Periodicals/ Serials/Journals:

Printed Books:- Upto 2018- 25013 nos.
2018-19 - 847 nos.

XI.4. Service offered by CLINS:

Same as Library Facilities.

XI.5. Information on Library Automation:

- The resources of the Library in terms of printed accessioned books have been entered, catalogued and classified into the Library Management Software.
- Digitization of all PG and Ph.D Theses, Rare books and documents. These documents have been entered into the **KrishiKosh**.
- Information hub has been introduced in all four libraries.
- Wi-fi Facilities has been provided in all the four libraries.
- Electronic circulation control system.
- Bar coding of all library document
- Electronic ID cards for library users and University staff.
- University library has subscribed several e-books and e-journal as follows :
 - CeRA Journals
 - EBSCO- e-books database
 - E-Journals (Foreign)
 - I-Scholar Journals
 - Indian Journals
 - J-Gate Online Portal
 - **Krishi kosh**: Full text access to Thesis, rare book and documents of all SAUs.
 - Remote XS for accessing the University e-resource from anywhere.

XII. IMPORTANT PROGRAMS OF THE HONOURABLE VICE CHANCELLOR OF THE UNIVERSITY DURING THE YEAR

Sl. No.	Hon'ble VC's Programs	Venue	Duration (Dates)
1.	W	Port Blair	03.5.2018 – 05.5.2018
2.	Zonal Workshop for Zone 4 & 5 for KVKs at OUAT	Bhubaneswar	25.5.2018 – 26.5.2018
3.	Sensitization workshop organized by ICAR in collaboration with Agrinnovate India Ltd	New Delhi	05.6.2018 – 06.6.2018
4.	Meetings with the ADG (EP&HS) and ADG (EQR), ICAR in connection with sanction of ICAR Development Grant and Accreditation of the Faculty of Dairy Technology	New Delhi	02.8.2018 – 03.8.2018
5.	7 th IAUA Regional Committee meeting of the Vice-Chancellors organized by IAUA in collaboration with CAAUS&T, Kanpur	Kanpur	28.8.2018 – 30.8.2018
6.	Meetings with the Officials for matters connected with the sanction of fund, submission of Plans & Estimates for Girls' Hostel & follow up regarding accreditation of Faculty of Dairy Technology, WBUAFS	New Delhi	13.9.2018 – 14.9.2018
7.	LUVAS, Hisar for inauguration of the 3 rd Annual Convention of Veterinary Biochemists and Biotechnologists of India and National Symposium	Hisar	01.11.2018 – 03.11.2018
8.	Bihar Animal Science University, Patna in connection with XI Biennial Conference of Animal Nutrition Association	Patna	19.11.2018
9.	Meeting with the Officials for submission of QRT Report of Directorate of Poultry Research, Hyderabad and regarding various matters connected with sanction of fund etc. of the University	New Delhi	06.12.2018 – 08.12.2018
10.	Vice-Chancellors' Conference organized by IAUA, New Delhi at NASC Complex	New Delhi	23.11.2018 – 24.11.2018
11.	Meeting with ICAR Officials	New Delhi	23.01.2019 – 25.01.2019
12.	Vice-Chancellors' Conference of ICAR	New Delhi	29.01.2019 – 30.01.2019

XIII. IMPORTANT EVENTS, EMINENT VISITORS, ACTIVITIES & ACHIEVEMENTS

West Bengal University of Animal & Fishery Sciences passed through series of events during 2018-19. Some of the important activities that took place in the University are as follows :

XIII.1. IMPORTANT EVENTS / ACHIEVEMENTS

XIII.1.1. TWELFTH CONVOCATION

12th Convocation of West Bengal University of Animal and Fishery Sciences took place on 14th June, 2018 at Belgachia campus of the University. Hon'ble Chancellor of the University and Governor of West Bengal His Excellency Sri Keshrinath Tripathy presided over the occasion. The Director General of ICAR, Dr. Trilochan Mahapatra delivered the convocation address as chief guest. He emphasized for job-led green economic growth, rooted in the principles of ecology, equity and sustainability and advised the degree recipients to continue their learning process throughout their lives to capture the uncommon opportunities. Sri Swapan Debnath, Hon'ble Minister of State (Independent Charge), Animal Resource Development, Govt. of West Bengal was also present on the occasion. On this special day of the University, 75 students received Undergraduate Degrees and 54 students acquired Master Degrees from three faculties of the University. 17 students were awarded Ph.D. degree. 25 students received Gold Medals for their academic excellence. Hon'ble Chancellor emphasised on the role of the students in the development of respective fields of Veterinary, Dairy and Fishery.



Fig 13.1 : Dignitaries on the dais of the Convocation Ceremony

Hon'ble Vice-Chancellor of the University Prof. Purnendu Biswas delivered the welcome address. In his speech he mentioned that WBUAFS has received the status of best Agricultural University of the State and has achieved a ranking of 28th among the Agricultural Universities in the Country. He also stated that since establishment of WBUAFS, in the last two decades, University has played an important role in disseminating the research outcome in the animal husbandry, dairy and fishery sector to the farming community of West Bengal. DG of ICAR said that the students of this University are holding different posts in the country and abroad and are working successfully. Hon'ble Minister informed that this University is playing a vital role in the development of our state.



Fig 13.2 : Degree being conferred during the 12th Convocation

XIII. 1.2. Celebration Of Silver Jubilee Foundation Day Of Wbuafs & 125 Years Of Bengal

Veterinary College

25th foundation day of West Bengal University of Animal and Fishery Sciences was celebrated on 2nd January, 2019 in the University Community Hall at Belgachia campus. This auspicious occasion was graced by Swami Atmapriyananda, Hon'ble Vice-Chancellor, Ramkrishna Mission Vivekananda Educational and Research Institute, Belur Math as the chief guest. Prof. Gaya Prasad, Hon'ble Vice-Chancellor, Sardar Vallabh Bhai Patel University of Agriculture & Technology, Meerut, U.P. delivered the Silver Jubilee lecture. On this occasion, university flag was hoisted by Hon'ble Vice Chancellor, Prof. P Biswas followed by award distribution and cultural programme.



Fig 13.3 : Celebration of Silver Jubilee Foundation Day



Fig 13.4 : Celebration of Quasiquicentennial Anniversary of Bengal Veterinary College

125 years of establishment of Bengal Veterinary College, Calcutta was commemorated by the University on 10th January, 2019. On this occasion a memorial was inaugurated by Sri Partha Chatterjee, Hon'ble Minister In-Charge, Department of Higher Education, Govt. Of West Bengal, in association with Hon'ble Vice Chancellor, Prof. Purnendu Biswas alongwith other dignitaries including Sri Swapan Debnath Hon'ble Minister of State (independent charge), Department of Animal Resource Development, Govt. Of West Bengal.

Awards were distributed to the teachers, staff, students and farmers for their performance in respective fields. Person who received the awards are as follows :

Faculty Members :

Dr. Paresh Nath Chatterjee	:	Best teacher of the University and Best teacher, Faculty of Veterinary & Animal
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Sciences :

Dr. Shib Kinkar Das	:	Best teacher, Faculty of Fishery Sciences
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Students :

Dr. Achinta Mahato	:	Best student of the University and Best student, Faculty of Veterinary & Animal Sciences
Mr. Nur Mohammed Mollah	:	Best student, Faculty of Fishery Sciences
Mr. Tamal Sarkar	:	Best student, Faculty of Dairy Technology

Employee :

Sri Ramesh Chandra Baskey	:	Best employee of the University
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Farmers (KVK) :

Sri Sudhangsu Biswas	:	Best progressive farmer, Jalpaiguri KVK
Md. Abdul Kalam	:	Best progressive farmer, Murshidabad KVK and
Sri Harinarayan Biswas	:	Best progressive farmer, North 24 Parganas KVK.

XIII.1.3. 8TH Conference of Indian Meat Science Association (IMSACON-VIII)

The Department of Livestock Products Technology, Faculty of Veterinary and Animal Sciences, WBUAFS, Kolkata organized an International Symposium and the 8th Conference of Indian Meat Science Association (IMSACON-VIII) on “Technological Innovations in Muscle Food Processing for Nutritional Security, Quality and Safety” during November 22-24, 2018. The Conference provided a platform for interaction and linkage amongst the scientists, academicians, processors and entrepreneurs from different parts of India and from Australia, Bangladesh and few other countries. They shared their opinion and experience on the present national scenario and offered suggestions for further accelerated growth in the muscle food industry. The Conference stressed on strategies with multispectral approach for enhancing state-of-art technologies and innovations for processing of muscle food from livestock, poultry and fish. Besides, the Conference proposed some tangible hints to the policy makers for creation of required infrastructure and enabling environment to boost muscle food industry in global perspectives. Indian Meat Science association proposed a gold medal in the name of IMSACON-VIII for the student of Livestock Products Technology ranking first in the Master’s degree programme. Same has been approved in the 100th Executive Council Meeting of the University for implementation from ensuing year.

XIII.1.4. ISEE National Seminar- 2018

West Bengal University Of Animal & Fishery Sciences in collaboration with Indian Society Of Extension Education (ISEE), IARI, New Delhi Organized The ISEE National Seminar 2018 On ‘Integrated Farming System For Enhancing Farmers’ Income And Nutritional Security’ from 5th - 7th December, 2018 at Belgachia Campus Of WBUAFS. The inaugural programme of the Seminar was graced by Sri Swapan Debnath, Minister of State, Department of Animal Resources Development, West Bengal, Sri Pradip Mazumdar, Advisor Agriculture to CM, West Bengal, Prof. Purnendu Biswas, Hon’ble Vice-Chancellor, WBUAFS, Dr. Baldeo Singh, President, ISEE and Ex-Joint Director Extension, IARI and Prof. S S Dana, Local Organising Secretary And Registrar, WBUAFS along with other dignitaries. More than 300 delegates from 14 states of India as well as abroad including Scientists, Academicians, Extension Functionaries, NGO Professionals, and farmers related to Agriculture, Fisheries and Animal Husbandry participated in the Seminar. The Seminar concluded with useful recommendations in the Plenary Session followed by Valedictory Programme.

XIII.1.5. 19TH Indian Veterinary Congress & XXVI Annual Conference of IAAVR



The 19th Indian Veterinary Congress, XXVI Annual Conference of IAAVR and National Symposium 2019 on “Innovative progress in animal health and production for Safe and Secure Food under one health program perspective” was held on February 1 - 2, 2019 at West Bengal University of Animal & Fishery Sciences, Kolkata. The Conference was organized by West Bengal University of Animal & Fishery Sciences and Indian Association for the Advancement of Veterinary Research (IAAVR) jointly. The Conference was inaugurated by Prof. Purnendu Biswas, Hon’ble Vice Chancellor, WBUAFS, Dr. B. B. Mallick, Former Hon’ble Vice Chancellor, WBUAFS, Major Gen. (Dr.) Shri Kant, Former Hon’ble Vice Chancellor, LUVAS, Dr. C. Balachandran, Hon’ble Vice Chancellor, TANUVAS, Dr. H. D. Narayanaswamy, Hon’ble Vice Chancellor, KAVAFSU, Dr. Y Hari Babu, Hon’ble Vice Chancellor, Sri Venkateswara Veterinary University, Tirupati, Dr. N. H. Kelawala, Hon’ble Vice Chancellor, Kamdhenu University, Gujrat, Dr. S.N. Singh, President, IAAVR, Dr. Rishendra Verma, Founder Secretary, IAAVR, Prof. A. Goswami, DREF & President Organizing Committee and Prof. S. Batabyal, DSW & Organizing Secretary. Around 300 delegates including Principle Scientists, Senior Scientists, Scientists, Professors, Associate Professors, Assistant Professors, field veterinarians and PhD Scholars participated in the conference.

XIII.1.6. FISH FESTIVAL AT WBUAFS

Directorate of Research, Extension & Farms (DREF), WBUAFS organized Fish Festival 2018 at Belgachia campus from 22nd to 24th November, 2018. The programme was sponsored by National Fisheries Development Board (NFDB), Hyderabad. The fish festival was inaugurated by Hon’ble Minister In-Charge, Sri Chandra Nath Sinha, Department of Fisheries, Government of West Bengal. Ms. I. Rani Kumudini, IAS, the Chief Executive, NFDB visited the festival on second day. The theme of the festival was “Pabda”. There were total 11 stalls from different restaurants, Self Help Groups and Govt. establishments who participated with

their mouth-watering cuisines. There were different fishery products displayed for exhibition and sale in the participating stalls. The visitors enjoyed the taste of traditional as well as commercial fish culinary. The festival aroused a good impetus for the SHGs and small entrepreneurs dealing with fish and fishery products.

XIII. 2. DISTINGUISHED VISITORS IN THE UNIVERSITY

1. Sri Keshari Nath Tripathi, His Excellency, Governor of West Bengal and Hon'ble Chancellor of the University
2. Dr. Trilochan Mahapatra, Director General of ICAR
3. Sri Partha Chatterjee, Hon'ble Minister In Charge, Department of Higher Education, Govt. of West Bengal
4. Sri Swapan Debnath, Hon'ble Minister of State (Independent Charge), Department of Animal Resource Development, Govt. of West Bengal
5. Swami Atmapriyananda, Hon'ble Vice-Chancellor, Ramkrishna Mission Vivekananda Educational and Research Institute, Belur Math
6. Prof. Gaya Prasad, Hon'ble Vice-Chancellor, Sardar Vallabh Bhai Patel University of Agriculture & Technology, Meerut, U.P.
7. Dr. Baldeo Singh, President, ISEE and Ex-Joint Director Extension, IARI
8. Sri Chandranath Sinha, Hon'ble Minister Incharge, Deptt. of Fisheries, Govt. of West Bengal
9. Dr. B. B. Mallick, Former Hon'ble Vice Chancellor, WBUAFS
10. Major Gen. (Dr.) Shri Kant, Former Hon'ble Vice Chancellor, LUVAS
11. Dr. C. Balachandran, Hon'ble Vice Chancellor, TANUVAS
12. Dr. H. D. Narayanaswamy, Hon'ble Vice Chancellor, KAVAFSU
13. Dr. Y Hari Babu, Hon'ble Vice Chancellor, Sri Venkateswara Veterinary University, Tirupati
14. Dr. N. H. Kelawala, Hon'ble Vice Chancellor, Kamdhenu University, Gujrat
15. Dr. S.N. Singh, President, IAAVR
16. Dr. Rishendra Verma, Founder Secretary, IAAVR
17. Sri Pradip Majumdar, Chief Advisor of Agriculture to Hon'ble Chief Minister, Govt. Of West Bengal
18. Dr. Pablo Alarcon, London School of Hygiene and Tropical Medicine, Royal Veterinary College (RVC)
19. Dr Ayako Ibata, Institute of Development Studies (IDS), UK; Liver Foundation
20. Ms. I. Rani Kumudini, IAS, the Chief Executive, NFDB
21. Dr. J.K. Jena, DDG (Fishery), ICAR, New Delhi
22. Prof . D.D.Patra, Hon'ble Vice Chancellor, BCKV
23. Prof . S.K. Ghosh, Hon'ble Vice Chancellor, Kalyani University
24. Dr. S.S. Singh, Director, ICAR ATARI, Kolkata

XIV. IMPORTANT CONTACTS

Sl No	Name & Designation	Phone No.	e-mail
1	Prof. P. Biswas, Vice Chancellor	(033)25571986 (Fax) (033)25563450 (O) 09433047745(M)	drpbiswas56@gmail.com
2	Prof. S.S. Dana Registrar (Acting)	(033)2556 3123(Tele Fax) 09231658017(M)	registrar@wbuafscl.ac.in danashyamsundar@gmail.com
3	Prof A. Goswami, Director of Research, Extension & Farms (Acting)	(033)25563396 (O) 09433242061(M)	dref.wbuafs@gmail.com arunasisvet@gmail.com
4	Prof. A.K. Sahoo, Dean, Faculty of Vety. & Animal Sciences	(033)25569234 (Tele Fax) 09432406478(M)	profaksahoo@gmail.com
5	Prof. B.K. Das, Dean, Faculty of Fishery Sciences	(033)24328763 (O) (033)24328749(Fax) 09433754489(M)	bkdaskly@gmail.com
6	Prof. T.K. Maity, Dean, Faculty of Dairy Technology	(033)25876307 (O) 09433307780(M)	maity.tk@gmail.com
7	Sri G. Majumdar, Finance Officer	(033)25285294 (O) (033)25328058 (Fax) 09007411135 (M)	fo.wbuafs@gmail.com
8	Prof. M.K. Mondal, Controller of Examinations	(033)25580278(O) (033)25467696 (Fax) 09424622791(M)	mkmext@gmail.com wbuafce@gmail.com
9	Central Library	(033)25280840 (Tele Fax)	centrallibrary@wbuafscl.ac.in
10	Farmers' Advisory Service	(033)25563396 (O)	kajer.jonno@gmail.com dref.wbuafs@gmail.com
11	University website		http://wbuafscl.ac.in

XV. EDITORIAL BOARD

Annual Report 2018 - 2019

Advisor	:	Prof. Purnendu Biswas	Hon'ble Vice Chancellor
Editor	:	Prof. A. Goswami	Director of Research, Extension & Farms (Actg.)
Members	:	Prof. S.S. Dana Prof. A.K. Sahoo Prof. B.K. Das Prof. T.K. Maity Prof. M.K. Mondal Sri G. Majumdar Dr. B.K. Chand Mrs. Aparajita Biswas	Registrar, WBUAFS (Actg.) Dean, F/O Veterinary & Animal Sciences (Actg.) Dean, F/O Fishery Sciences Dean, F/O Dairy Technology Controller of Examinations Finance Officer Dy. Director of Research Computer Programmer, DREF





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