



ANNUAL REPORT

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West Bengal University of Animal & Fishery Sciences

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Kolkata – 700 037, West Bengal
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ANNUAL REPORT

(2012 - 13 and 2013 - 14)

West Bengal University of Animal & Fishery Sciences

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Website : <http://wbuaafscl.ac.in>

Published by

Prof. P. Biswas

Registrar (Actg.)

Edited by

Prof. S. Biswas

Director of Research, Extension & Farms (Actg.)

and

Dr. Pankaj Kumar Biswas

Deputy Registrar

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FOREWORD

I am extremely delighted to present the Annual Report of the West Bengal University of Animal and Fishery Sciences which highlights the principal and development activities of the varsity and various achievements made during the period 2012-13 and 2013-14.



We know even after 67 years of independence, India is known as an agriculture based country. On an average 60% of the Indian population are directly or indirectly associated with agricultural activities. Although GDP from agriculture has been declining but majority of Indian population are engaged in agriculture under some kind of compulsion.

Along with agriculture, animal husbandry, dairying and fisheries sectors also play very important role in the national economy and in the socio-economic development of the country. As a result of green revolution, followed by the white revolution, blue revolution, pink revolution and yellow revolution, India has become self sufficient in various areas of agricultural produce. Which brings the food security to Indian population but now the country needs nutritional security. Development in the field of Animal Husbandry, Dairy and Fisheries along with Agriculture and Horticulture can ensure nutritional security to the vast population of this country. Moreover, these sectors also play a significant role in supplementing family income and generating gainful employment in the rural sector. India's livestock wealth is very significant in the world. It accounts for about 57.3 per cent of the world's buffalo population and 14.7 per cent of the cattle population. There are about 71.6 million sheep, 140.5 million goats and 11.1 million pigs in India. In addition, India has a vast resource of livestock and poultry. Poultry development in the country has shown a continuous progress over the years. Egg production in 2011-12 was 66.45 billion and the poultry meat production was about 2.47 million tones.

In 2009-10 milk production was 116.4 mt, which had reached to 132.43 mt. during 2012-13. Similarly the fish production has been increasing significantly. Presently India is the second largest producer of fish. Fishery sector contributes significantly to the national economy, while providing livelihood to approximately 14.49 million people in the country. In 2011-12 production of meat was 5.5 mt. which is more than double in compare to the production level of 2006-07.

It is now very clear that India's livestock sector is economically better than the agriculture itself. The livestock and fishery sector also play a pivotal role in sustainable agricultural production system for the small and marginal farmers and landless labourers of the country.

The West Bengal University of Animal and Fishery Sciences is well known as one of the leading institutions in the eastern region of the country, shouldering the responsibilities of education, research and extension activities in veterinary animal science, dairy and fishery sciences. Like many other Agricultural Universities in the country, our University also plays a major role for the uplift of the livelihood of farming communities of the State.

West Bengal is famous for its Black Bengal goat, Garole and Banapla sheep, ghongroo pig and also for our indigenous fowl and duck population. Besides, we have a large population of low yielding cattle. West Bengal also possesses many kinds of large and small water bodies. A total farming system combining crop cultivation with horticulture, livestock and fish farming can transform the economic scenario of the state. Integrated farming system involves the utilization of primary produce and secondary produce of one system as basic input of other system, thus making the mutually integrated as one whole unit.



The very basic purpose of our University is to create knowledgeable human resources by imparting modern education and through quality research. Quality of teaching and research activities have received best importance during these years. In addition we provide training for up-gradation of knowledge of the farming communities as a part of our extension education programme.

At present this University runs three Krishi Vigyan Kendras. One, at Ramshai, Dist. Jalpaiguri; Digha, Dist. Murshidabad and Ashokenagar, Dist. North 24-Parganas. The process of dissemination of knowledge and techniques has been significantly undertaken by those Krishi Vigyan Kendras. The Directorate of Research, Extension & Farms has been conducting various training programmes on livestock, poultry and fishery aspects for the State Govt. officials and also for the farmers.

The implications of climate change on agriculture including animal husbandry and vice versa need to be studied very seriously. Dedicated research programme should be initiated to combat global warming. The changing climate has become an important research subject in agriculture and allied sectors today.

I am thankful to the Govt. of West Bengal, ICAR and other funding agencies for their assistance. Our University could never attain the success it has achieved without the active support and patronage of the Government of West Bengal, ICAR and other agencies.

I appreciate the efforts made by the editorial and publication board in bringing out the Annual Report in precise and attractive form. I would like to thank all my colleagues in West Bengal University of Animal & Fishery Sciences for their incredible work and cooperation. I shall look forward for suggestions and comments on the information contained in this publication, which would prove to be very much valuable for future activities.

(C. S. Chakrabarti)


Vice-Chancellor

PROLOGUE

It's a great pleasure to me to publish the Annual Report for the period of 2012-2013 and 2013-2014 of West Bengal University of Animal & Fishery Sciences. Progress achieved by the different sectors of this University during the last two years have been compiled in the report. I am very much thankful to all the Teachers, Officers, Staff, Research Scholars and Students of this University for their whole hearted co-operation and support not only for the publication of this report but also for their attachment and contribution for the development of our beloved University. I also like to extend my sincere gratitude to the Hon'ble Vice-Chancellor for his untiring support to publish this Annual Report.



I do hope that our beloved University will continue to progress in the same fashion with the involvement of all categories of Teachers, Officers, Staff and Students of the University.



Prof. Purnendu Biswas

Registrar (Actg.)

PREFACE



Since its establishment in the year 1995, West Bengal University of Animal & Fishery Sciences is spearheading towards development in the state of West Bengal in the field of animal science. This is being accomplished through researches, education and extension activities undertaken by the University through its three academic and research campuses and three Krishi Vignyan Kendras. Besides, budding and disseminating animal science technologies, this University is also developing proficient human resources to take the edge off the present and future tribulations relating to animal science for the state of West Bengal in particular and for the whole of the country in general.

Our country is facing quite a few challenges and the most taxing one is to exchange blows aligned with malnutrition and dearth of protein to the people of the nation. Owing to the deteriorating and depleted natural resources and changing agro-climatic situations, biotic and abiotic elements are diminishing and the crisis is getting more and more assorted and stiffer. These emerging issues are to be addressed to get hold of the goal of reaching self-sufficiency in food production. With the promulgation of the food safety and food security acts, the role of ours becomes more pertinent and formidable and the total aspects should be taken care of along with energy-balanced and bio-safety growth.

The IPR trade regulations- technology acquisition and transfer, declined fondness to the farm activities by the new generations, reduction in farm size, changes in dietary preferences, all these made the total set-up more knotty, more exigent and thus very much difficult for their redressal unless planners could chalk-out the road map considering the problems at grass route level. It is important to consider all these aspects in order to organize 2nd green revolution particular in Eastern India within next couple of years.

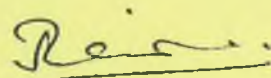
With this in mind, our nation is at the way to put together Vision 2050 in a war-footing approach to add in various facets into the national 12th five year plan.

Our University, at the age of 19 is playing a brilliant role in the field of fundamental and applied research in both animal and fishery science sectors to facilitate the problems as a supporting force at the National front.

The Krishi Vignyan Kendras, mouth piece of our activities, are augmenting the different sectors of agriculture animal husbandry and fishery sciences and are engaged in different extension programme and also in solving the problems of the farmers at their door step through frontline demonstration methods. Thus, the farmers are gaining confidence for achieving better productivity which finally add to the national growth in terms of GDI to alley the hunger of thousand masses of our country.

This annual report of our University is providing the latest information during the period of 2012-14 and will be useful for the University fraternity to get abreast of their fellows activity to make them encouraged to take up enhanced activities in future course of time by them also.

I appreciate and acknowledge the endeavour of the officers and staff members of DREF of the University for bringing out this instant publication. The help rendered by the Principal Investigators of different projects am teachers of are gratefully acknowledged.



(Prof. Subhasish Biswas)

Director of Research, Extension & Farms (Actg.)

ACKNOWLEDGEMENTS

It gives me great pleasure to express my satisfaction with the publication of 8th issue of “Annual Report: 2012-13 & 2013-14” of the West Bengal University of Animal & Fishery Sciences which highlights the overall performances and achievements of the University during the last two financial years. This edition of ‘Annual Report’ provides a glance of different activities of the University undertaken during last 2 years. This document is purely a collection and compilation of progress of education, research and extension findings performed by faculty teachers, researchers, scientists, officers and supporting staff of the University during the relevant periods. I strongly believe that the instant publication will be worthy for the teachers, students, research scholars, researchers, scientists, academicians, industry and other end users.

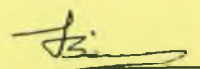


This report will be meaningful for highlighting the events & activities of the University in a fascinating way. WBUAFS looks back on eventful & successful years of 2012-2013 and 2013-2014 which relate to the first & second years of the XII five year plan period of 2012-2017. We have met the challenges so far and will continue to enforce this process even further in 2014-2015 by the way of continuous focus to strengthen of our overall academic, research & extension activities. The information in this Annual Report has been arranged in such a way that it provides a panoramic view of this University in its achievements & progress on entire academic, research & extension education through dynamic administrative control during the years.

The Report is also the documentation of this University towards progress of research works, field studies carried out, results obtained, various activities and achievements of research, technology generated and recommendation for farming & scientific communities made in the fields of veterinary & animal sciences, dairy technology and fishery sciences through externally funded research projects in the year 2012-14. The University is conducting basic and applied research in the field of animal sciences and fishery sciences through three faculties and research units for development of technologies to support production enhancement, profitability, competitiveness and sustainability of livestock, poultry and fishery sector for providing food and nutritional security to the state and nation as a whole.

I appreciate the efforts made by the teachers, scientists and researchers of this University in bringing out this publication. I express my deep sense of gratitude to the Hon'ble Vice Chancellor, Prof. C. S. Chakrabarti for his valuable suggestions, guidance and support in bringing out the publication. I am grateful to Prof. S. Biswas, Director of Research, Extension & Farms and Controller of Examinations for his valuable guidance in conducting this programme. I would like to express my sincere thanks to Prof. P. Biswas, Registrar, Prof. P. K. Senapati, Dean, Faculty of Veterinary & Animal Sciences, Prof. B. K. Das, Dean, Faculty of Fishery Sciences, Prof. T. K. Maity, Dean, Dairy Technology, Sri Shyamal Chattopadhyay, Finance Officer, Sri Anuj Kr. Chakraborty, Secretary, Faculty Council for their cooperation and support in preparation of the Annual Report.

I sincerely acknowledge the timely help and support of Dr. S. Chandra, Dr. B. K. Biswas, Dr. (Mrs.) S. Das, Dr. B. K. Chand, Mrs. A. Biswas and Dr. K. C. Dhara. I am also thankful to all the funding agencies for their cooperation and timely financial support in favour of the research projects and development works of this University. I look for suggestions and comments on this publication to improve the quality in future. I once again believe that this publication would serve as a source of valuable information to the University officials, other academic & research institutes, funding agencies, policy makers engaged in the livestock & fishery sectors.



(Dr. Pankaj Kumar Biswas)
Deputy Registrar

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EXECUTIVE SUMMARY

Livestock sector in India is playing an important role in the socio-economic spheres of our people. Likewise, West Bengal is a state where livestock and fisheries play an important role in the subsistence of the small and marginal farmers and landless labourers, which constitute the major chunk of its population. Consequently, the state government, realizing the need for improvement and potential of these two important sectors and for that matter to pay its focused attention, established the West Bengal University of Animal & Fishery Sciences after being bifurcated from Bidhan Chandra Krishi Viswavidyalaya (BCKV) came into on January 02, 1995 vide West Bengal Act VI of 1995 with its Headquarter at Belgachia, Kolkata. The University has 3 (three) Faculties viz. *Faculty of Veterinary & Animal & Sciences (VAS)*, *Faculty of Dairy Technology (DT)* and *Faculty of Fishery Sciences (FS)* for boosting up the livestock fisheries resources of the state. The faculty of VAS is located at the University Head Quarters at Kolkata, whereas the Faculties of DT and FS are located at Mohanpur (District-Nadia) and in a separate campus at Chakgaria in Kolkata, respectively.

The mission of the University is comprised of strengthening the economy of the rural mass in particular and the country in general through promotion and improvement of the animal resources including aquaculture resources and dairy products by generation of trained human resources, advanced technologies and dissemination of scientific knowledge to the target population. In order to achieve this mission the University functions with the following mandates:

1. **Teaching-** for generation of trained and expert human resources in the fields of Veterinary & Animal Sciences, Dairy Technology & Allied fields and Fishery Sciences by imparting quality teaching at the undergraduate and postgraduate including doctorate levels.
2. **Research-** Refinement of the existing technologies and development of improved technologies by undertaking research programmes on the priority areas of the three fields in its constituent faculties.
3. **Extension-** Dissemination of the scientific know-how of the existing technologies and transfer of the modern technologies and motivating the target population for their adoption with a view to strengthening and improvement of their livelihood standard.

AUTHORITIES AND GOVERNANCE:

The Governor of the State is the Chancellor of the University. The Vice Chancellor, appointed by the Chancellor, is the Chief Executive and acts as the Chairman of the Executive Council of the university. The Executive Council is the highest authority to approve and review the university budget, it approves the recommendations for all appointments, creates new posts with the approval of the state government for recruitment in different categories, makes provision for institution and conferment of degrees, diplomas and other academic distinctions; decides on creation of new departments and establishments with financial provision. This apex authority comprises of *Ex-Officio* members, elected members from all sections of the employees and the students and nominated members of the ICAR, VCI, Nodal Departments of the State Government, State Legislative Assembly and the Farming Community.



The other statutory authorities, with the Vice Chancellor being the Chairman, are the Academic Council, Finance Committee, Research & Extension Education Council and three Faculty Councils. Besides these, the Board of Examinations, with one of the Deans (on rotation) as the Chairman, takes due care of the matters related to examinations, results and other associated affairs. For planning and execution at the department level each department of the three faculties has the statutory body, the Board of Studies with the head of the Department as its Chairman. The overall governance by all the administrative bodies is done following the guidelines laid down in the university Act and its Statutes, which is amended from time to time with the approval of the Executive Council.

EDUCATION:

The university offers 3 Bachelors, 28 Masters and 22 Doctorate degree programmes in different disciplines in the respective constituent faculties. The faculty of VAS offers a five-years' B.V.Sc. & A.H. degree programme, a two-years' M.V.Sc. programme and a three years' Ph.D. programme in 19 disciplines. The uniform course curriculum and evaluation system formulated by the Veterinary Council of India (VCI) for undergraduate programme and a semester system with course work and research work for M.V.Sc. and Ph.D. programmes are followed with 10-credit-point scale of evaluation. The faculty of D.T. offers a four-years' degree programme, i.e. B.Tech. (Dairy Technology) approved by ICAR and AICTE, New Delhi, two-years' M.Tech. & three-years' Ph.D. in Dairy Technology, two-years' M.Sc. & three-years' Ph.D. in Dairy Chemistry and Dairy Bacteriology. The faculty of F.S. offers a four-years' bachelors' degree B.F.Sc., masters degree (M.F.Sc.) in seven disciplines and three- years' Ph.D. degree in only two disciplines.

The admission criteria and number of seats in the degree programmes ensure for quality intake and imparting quality education and training. In the undergraduate programme, the faculty of VAS has the provision for admission of 60 students, the DT faculty of 30 students and the FS faculty of 32 students. The admission is made through a special entrance examination (EVETS) for B.V.Sc. & A.H. programme; admission to B.Tech. (Dairy Technology) programme is made through West Bengal joint entrance examination and in B.F.Sc. programme it is on the basis of merit in the qualifying examination. The candidates with a rural background from across the state constitute the majority of the undergraduate students. The admission in masters and doctorate programmes is made on the basis of marks/ grade point in the qualifying examinations and performance in the interview. Besides, 15 per cent of the total students in B.V.Sc. & A.H. programme are nominated by the VCI and some students are nominated by the ICAR for admission to master's degree programmes in all the faculties. Reservation policy as approved by the state government is followed for admission to all the degree programmes.

In addition to its degree programmes the university conducts need based training programmes. Organization of national and international conferences, seminars & symposia and workshops also form an important component of the university's academic activities.

FACULTY:

The strength of an university lies on its faculties and is reflected through its products-the students. The best available talents are, therefore, attracted from entire the country through advertisement in the National Dailies and recruited in the faculty following the selection process as per the ICAR norms and University Statutes. The talent of the faculty is given all possible opportunities to flourish, e.g. congenial academic environment and the promotional avenues through career advancement schemes according to the ICAR guidelines. Presently, the mandates of the university are pursued by a total of 133 faculty members (VAS-103, DT-12, FS-18) with the support of the technical and supporting staff in its three faculties.



STUDENT DEVELOPMENT:

During the period of 2012-2014 the university produced a total of 414 trained and specialized manpower comprising the graduates, postgraduates and doctorates, in its three faculties. The faculty of VAS contributed 102 graduates and 105 postgraduates and 22 doctorates in its 19 disciplines, Faculty of DT produced 79 qualified manpower, of which 65 were graduates and 14 were postgraduates. The faculty of FS has pushed into service a total of 106 qualified manpower including 60 graduates and 46 postgraduates. The graduates and postgraduates of this university during the last two years have secured employment in government/public sectors (including state and central govt. like State ARD Department, WBCS, ICAR, State university, Banks, Insurance etc.) as well as in private sectors like pharmaceutical, feed manufacturing and poultry concerns. Besides, a major chunk of the students acquiring their degrees, some with ICAR Fellowship and placements, have joined this university and other state agricultural universities and national institutes for pursuing higher studies, e.g. M.Sc./M.V.Sc. and Ph.D.

LIBRARY:

The university has a Central Library at the headquarters at Kolkata and two Faculty Libraries in the faculty of DT and FS. Presently, the library has a total of 20000 books including reference (3000) and general books (1200), which adequately cater the needs of the faculty members, officers, technical, & supporting staff and the students of the university. There are 50 periodicals including 27 foreign periodicals are annually subscribed by the library in addition to holding various other primary, secondary and tertiary materials. Computer aided facilities, e.g. Internet browsing, CD ROM, e-consortium for searching full research articles are also provided to the teachers, students and other categories of the university employees. Photocopying facility is also provided at a subsidized rate.

PHYSICAL FACILITIES:

The university in a short span after its inception in 1995 has made appropriate provisions for adequate physical facilities for imparting quality teaching and undertaking advanced research works in different concerned fields. Thus the existing physical facilities in terms of well equipped classrooms; laboratories, instructional farms, instruments and equipment, computers and Internet connectivity etc. do not in any way come in the way of quality education and research. Nevertheless, all out efforts are underway for further improvement of the existing facilities. The library comprising three units including its Central unit adequately cater to the need of the students and the teachers in respect of books, journals, periodicals and other necessary facilities. There is sufficient number of hostels including Girls' hostels for meeting the residential requirement of the students and a Farmers' Hostel-cum-International Guest House & a University Guest House are existing for Guests and Farmers is under construction. For giving due opportunity of flourishing the students' extracurricular talents the university has playgrounds, gymnasium and facilities for cultural activities and in-door games.

A separate administrative building comprising the Vice Chancellor's Office and University Meeting Room, Registrars Office, Finance Office along with separate unit of Directorate of Research, Extension & Farms, Office of the Controller of Examinations, Security & Estate Office and a Auditorium. For taking care of the health of its students and the employees the university has a Central Medical Unit at the university headquarters at Kolkata with a full-time Medical Officer.

FINANCE:

Financial solvency constitutes one of the key factors for optimum development and growth of an academic and research institution. The university is primarily financed by the state government through allocation of funds in the Non-Plan head for meeting the salaries and allowances of the employees and other establishment costs of the university. State government also releases Plan funds for undertaking infrastructure development and contribution of state's share to the Central fund for different projects. The finance out of the university's internal resources is and has been very meager. However, major development in the infrastructure and education fronts has been due to the allocation by the ICAR in the form of Specific Grant and Development Grant.



A major financial contribution to the development of the research and extension infrastructure has been from the external agencies funding the research projects in the university. The present number of on-going research projects in the university is thirty-seven (37).

RESEARCH:

Research programmes of the university constitute the university funded projects including the PG & Ph.D. research and the research projects funded by the external agencies, viz. ICAR, NAIP, ICMR, UGC, DBT, DST, NFDB, NABARD etc. and the private agencies. The university-funded projects are carried out as a part of the PG & Ph.D. degree programme under the supervision of duly constituted advisory committees and with the overall supervision of the Controller of Examinations. Such research projects primarily address the priority research areas of the state in addition to basic and applied research. The research projects funded by external agencies are operated under the overall supervision of the Director of Research, Extension & Farms. These projects not only address the local research needs but also take care of the national priorities.

At present, a total of 37 external funded research projects are being executed in the university with a total fund allocation of Rs. 26.82 crores received from various funding agencies which comprise AICRP-ICAR, NAIP-ICAR, Network-ICAR, ICAR, Industry, DST, DBT, Ministry of Agriculture-GOI, GOI. During the period 2012-14, the university has completed 12 research projects (total allocation-Rs. 13.00 crores) receiving funds from external agencies like ICAR, DST, DBT, UGC and Industry. The projects are in operation in all the constituent faculties, e.g. 30 are in the faculty of VAS with a total allocation of Rs. 14.35 crores, five in the F.S. faculty (total allocation-Rs.11.96 crores) and two in the directorate of Research, Extension & Farms (total allocation-Rs.50.14 lakhs). For refinement of the technologies generated in its faculties the university has three KVK's located at three agro-climatic zones of the state.

EXTENSION:

Extension activities of the university comprise generation of trained and qualified human resources and outreach education and transfer of technology. Two academic departments i.e. Department of Veterinary & A.H. Extension Education and Department of Fishery Extension presently accomplish generation of trained and qualified human resources. Outreach education and transfer of technology to the stakeholders of the state is achieved through three Krishi Vigyan Kendras located at three agro-climatic zones of the state. Organizing different extension activities including front line demonstrations pursues this objective.

FARMS:

The university farms presently address the needs for, demonstration & instructional and research needs of the undergraduate and postgraduate students and the faculty of the university. Besides, germplasm of the selected livestock species, viz. Black Bengal goat, Gunroo pig, Banpola sheep and Haringhata fowl are also disseminated to the farmers for breed improvement and enhanced productivity. The farms constitute a Pig unit (Floor space-3000 sq. ft.), Sheep unit (Floor space-2000 sq. ft.), Goat unit (Floor space-1000 sq. ft.), Cattle unit (Floor space-2000-sq. ft.) and a Fodder unit (Floor space-20 acres). In addition the KVK, Ramsai, Dist. Jalpaiguri has a farm unit for the purpose of demonstration to the farmers. In the faculty of Fishery Sciences there is a hatchery for quality fish seed production.

VETERINARY CLINICS & HOSPITAL:

The faculty of VAS extends animal health care services for pet animals, birds and both small & large livestock through its Veterinary Clinics & Hospital, one at its Kolkata campus and another at its Mohanpur campus.



1

ABOUT UNIVERSITY :

1. UNIVERSITY HISTORICAL DEVELOPMENT AND BACKGROUND

Importance laid to the animals and animal resources in the pre-historic period, the fundamental national goal and priority of university education & research as envisaged by the illustrious builders of modern India and eminent educationists like Dr. S. Radhakrishnan, Dr. Kothari and the strong conviction of the then Vice President of India Shri K. R. Narayanan as expressed on the Centenary Celebration Platform of the Bengal Veterinary College on January 10, 1883 constituted the background inspiration for the genesis of the West Bengal University of Animal & Fishery Sciences (WBUAFS).

During the centenary celebration of Bengal Veterinary College in 1993, it was felt to establish an independent Veterinary and Animal Sciences University to fulfill the needs of the State for promoting education, research and extension activities in the field of Veterinary and Animal Sciences including Fishery Sciences.

Finally as per recommendation of an expert committee constituted by Government of West Bengal, the West Bengal University of Animal and Fishery Sciences was established in 1995 with its Headquarter at 68, K. B. Sarani, Belgachia, Kolkata- 700 037 in the former premises of Bengal Veterinary College.

The State Government vide the West Bengal University of Animal & Fishery Sciences Act, 1995 (West Ben. Act VI of 1995) established this university after bifurcating the BCKV and the WBUAFS came into being on January 02, 1995 with three constituent faculties and its headquarters at Kolkata. Subsequently, the Governor, by virtue of the power conferred on him through the Act, approved and published the First Statutes of the university on April 22, 1998.

2. MANDATES OF THE UNIVERSITY:

- ❖ To impart education in various branches of Veterinary & Animal Sciences, Dairy Technology and Fishery Sciences.
- ❖ To promote basic and applied research in Veterinary & Animal Sciences, Dairy Technology and Fishery Sciences.
- ❖ To undertake programmes of transfer of advanced technologies to improve Animal, Fish and Milk production.

3. MISSIONS OF THE UNIVERSITY:

- ❖ To produce better quality of Veterinary doctors, dairy technologists and fishery scientist in the State.
- ❖ To create self-employment through livestock, dairy and fish farming.
- ❖ To develop women empowerment.



- ❖ To conduct need-based research on livestock, dairy and fishery sectors.
- ❖ To disseminate improved livestock, dairy and fishery practices at the door steps of the stakeholders.

4. CAMPUSES OF THE UNIVERSITY:

The University is functioning at Belgachia (Kolkata), Mohanpur (Nadia) and at Chakgaria (Kolkata) campuses. The University Head quarter is at Belgachia, Kolkata. The location is very well connected by air (8 KMs from Netaji Subhas International Airport, Kolkata), train (2 KMs from Kolkata, 5 KMs from Sealdah and 8 KMs from Howrah Railway Stations) and road (over Khsudiram Bose Sarani, 4 KMs from NH 35, 3 KMs from VIP Road and 2 KMs from Shaymbazar Five Points More, Kolkata). The nearby district head quarters are Howrah (which is also the State Head Quarter is 13KMs), Barasat, North 24 Parganas district (18 Kms) and Alipore, South 24 Parganas district (13 KMs). The University has been recognized by the Indian Council of Agricultural Research, New Delhi; Veterinary Council of India, New Delhi and All India Council of Technical Education for the courses run under the three Faculties as relevant thereto.

5. FACULTIES :

There are three faculties under this University, namely -

- A. Faculties of Veterinary & Animal Sciences at Belgachia, Kolkata.
- B. Faculty of Dairy Technology at Mohanpur, Dist. Nadia.
- C. Faculty of Fishery Sciences at Chakgaria, Panchasayar, Kolkata.



2

| ORGANIZATIONAL SET-UP :

The organizational structure of the West Bengal University of Animal & Fishery Sciences follows the pattern of State Agricultural Universities' SAUs). The policy making functions of West Bengal University of Animal & Fishery Sciences (WBUAFS) are managed through different bodies constituted for the purpose of Education, Research and Extension activities as shown below:

Executive Council (EC)

Faculty Council (FC)

Academic Council

Research and Extension Education Council (REEC)

Finance Committee

Board of Examinations

Board of Studies

The **Executive Council (EC)** is the highest policy making body of this University. The **Faculty Council (FC)** is the authority of academic affairs of the University and is responsible for the control & maintenance of the standards of instruction, education and examination along with conferment of degrees or award of diploma. The **Academic Council** will be the academic authority and will have the control and general regulation of teaching and examination in the University and responsible for the maintenance of the standards prescribed. The **Finance Committee** governs the finance and accounts of the University. The **Research and Extension Education Council (REEC)** is the policy making body on Research and Extension Education in the Faculties and Research Stations of the University.

The Education, Research and Extension activities of the University are managed by the Vice Chancellor with the assistance of Registrar, Director of Research, Extension & Farms, Finance Officer, Controller of Examination, Deans of the Faculties, Librarian along with various authorities, Committees & Sub-Committees of the University.



ADMINISTRATIVE SETUP OF THE UNIVERSITY: ORGANOGRAM OF WBUAFS

Chancellor (His Excellency Governor of West Bengal)



**STATUTORY OFFICERS OF THE UNIVERSITY:**

Sl.No	Designation	Name
1	Vice-Chancellor	Prof. C. S. Chakrabarti
2	Director of Research, Ext. & Farms	Prof. Subhasis Biswas (Actg.)
3	Registrar	Prof. P.Biswas (Actg.)
4	Finance Officer	Sri S.Chattopadhyay (Deputation)
5	Controller of Examination	Prof. Subhasis Biswas (Actg.)
6	Dean, F/o Vety. & Animal Sc.	Prof. P.K.Senapati (Actg.)
7	Dean, F/o Fishery Sciences	Prof. B K Das (Actg.)
8	Dean, F/o Dairy Technology	Prof. T.K.Maity (Actg.)
9	Librarian	Vacant

NON-STATUTORY OFFICERS OF THE UNIVERSITY:

Sl.No	Designation	Name
1	DSW	Prof. A. K. Samanta (Actg.)
2	Secretary, Faculty Council	Sri A. K. Chakraborty
3	Deputy Registrar - I	Dr. P.K.Biswas
4	Deputy Registrar - II	Dr. S.Chandra
5	Deputy Librarian	Sri C.Gupta
6	Deputy Director (Research)	Vacant
7	Deputy Director (Research)	Vacant
8	Asstt. Director (Research)	Vacant
9	Asstt. Director (Extension)	Vacant
10	Asstt. Director (Farms)	Dr. Keshab Chandra Dhara
11	Scientist	Dr. B.K.Biswas
12	Scientist	Dr. (Mrs.) S Das
13	Farm Manager	Dr. B.K.Chand
14	Computer Programmer	Mrs. A.Biswas
15	Medical Officer	Dr. N.Kulavi
16	Asstt. Registrar	Sri. P.K.Roy
17	Asstt. Finance Officer	Sri. T.S.Mazumder (Deputation)
18	Asstt. Finance Officer	Sri A.K.Roy
19	Asstt. Librarian	Smt. Gauri Chatterjee
20	Estate cum Security Officer	Vacant
21	Sports Officer	Vacant
22	Law Officer	Vacant



STATUTORY BODIES:

EXECUTIVE COUNCIL

Sl.No	Position	Name & Designation
1	Vice Chancellor & ex-officio Chairman	Prof. C. S. Chakrabarti Vice Chancellor
2	Director of Veterinary Services, Govt. of WB, ex-officio Member	Dr. S. Bose Director of AH & VS, Govt. of WB
3	Director of Fisheries, Govt. of WB, ex-officio Member	Smt. Malobika Jha Director of Fisheries, Govt. of WB
4	Milk Commissioner, Govt. of WB, ex-officio Member	Sri Dibakar Mukhopadhyay Milk Commissioner Govt. of WB
5	The Deans of Faculties, ex-officio Member	Prof. P.K.Senapati (Actg.) Dean, F/o Vety. & Animal Sc.
6		Prof. B.K.Das (Actg.) Dean, F/o Fishery Sciences
7		Prof. T.K.Maity (Actg.) Dean, F/o Dairy Technology
8	Director of Research, Ext. & Farms, ex-officio Member	Prof. Subhasis Biswas (Actg.) Director of Research, Ext. & Farms
9	Three teachers of the University of whom one shall be from each faculty elected by the teachers of the concerned faculty. Elected members.	Prof. A.K.Samanta, F/o Vety. & Animal Sc.
10		Sri Supratim Chowdhury, F/o Fishery Sciences
11		Dr. P.K.Roy, F/o Dairy Technology
12	One member of the non-teaching staff of the University elected by the members of the non- teaching staff of the University. Elected member.	Sri Amlan Bhattacharya Jr. Superintendent, Office of Dean, VAS
13	One member from the regular students of the University elected by the regular students of the University. Elected member.	Vacant
14	One member of W. B. Legislative Assembly elected by the members of W. B. Legislative Assembly. Nominated member.	Smt. Mala Saha, MLA
15	One representative of the Indian Veterinary Council nominated by the Council. Nominated member.	Dr. S.V.Ingle
16	Three members from farmers or producers	Vacant
17	Nominated by the State Govt. Nominated	Vacant
18	Member	Vacant
19	One representative of the ICAR nominated by that Council. Nominated member.	Dr. J.K.Jena, Director, NBFGR, Lucknow
20	Registrar & ex-officio Non-member Secretary	Prof. P.Biswas, Registrar (Actg.)



FACULTY COUNCIL

1. Veterinary & Animal Sciences

Sl.No	Position	Name
1	Vice Chancellor, Chairman	Prof. C. S. Chakrabarti
2	Registrar, Member	Prof. P.Biswas (Actg)
3	Director of Research, Ext. & Farms, ex officio Member	Prof. Subhasis Biswas (Actg)
4	Librarian	Vacant
5	Dean, F/o Veterinary & Animal Sciences	Prof. P.K.Senapati (Actg)
6	All Heads of the Dept. F/o Vety. & Animal Sc.	Heads of 19 Dept.
7	Professor from respective Faculty, Elected Member	Prof. P.K.Senapati
8	Reader from respective Faculty, Elected Member	Dr. Samar Halder
9	Lecturer from respective Faculty, Elected Member	Dr. Joydip Mukherjee
10	Elected UG students' representative	Vacant
11	Elected PG students' representative	Vacant
12	Secretary, Faculty Council as Member Secretary	Sri A.K.Chakraborty

2. Fishery Sciences

Sl.No	Position	Name
1	Vice Chancellor, Chairman	Prof. C. S. Chakrabarti
2	Registrar, Member	Prof. P.Biswas (Actg)
3	Director of Research, Ext. & Farms, ex-officio Member	Prof. Subhasis Biswas (Actg)
4	Librarian	Vacant
5	Dean, F/o Fishery Sciences	Prof. B.K.Das (Actg)
6	All Heads of the Dept., F/o Fishery Sciences	Heads of 8 Depts.
7	Professor from respective Faculty, Elected Member	Prof. T.J.Abraham
8	Reader from respective Faculty, Elected Member	Dr. Anandamay Mondal
9	Lecturer from respective Faculty, Elected Member	Sri Supratim Chowdhury
10	Elected UG students' representative	Vacant
11	Elected PG students' representative	Vacant
12	Secretary, Faculty Council as Member Secretary	Sri A.K.Chakraborty

3. Dairy Technology

Sl.No	Position	Name
1	Vice Chancellor, Chairman	Prof. C. S. Chakrabarti
2	Registrar, Member	Prof. P.Biswas (Actg)
3	Director of Research, Ext. & Farms, ex-officio Member	Prof. Subhasis Biswas (Actg)
4	Librarian	Vacant
5	Dean, F/o Dairy Technology	Prof. T.K.Maity (Actg)
6	All Heads of the Dept., F/o Dairy Technology	Heads of 4 Depts.
7	Professor from respective Faculty, Elected Member	Prof. T.K.Maity
8	Reader from respective Faculty, Elected Member	Dr. S.K.Bag
9	Lecturer from respective Faculty, Elected Member	Dr. P.K.Roy
10	Elected UG students' representative	Vacant
11	Elected PG students' representative	Vacant
12	Secretary, Faculty Council as Member Secretary	Sri A.K.Chakraborty

BOARD OF STUDIES

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

FINANCE COMMITTEE

Sl.No	Composition	Position
1	Vice-Chancellor	Ex-officio Chairman
2	Nominated Member	Member
3	Secretary, Finance Dept., Govt. of West Bengal or his representative	Member
4	Secretary, Animal Resource Development Dept., Govt. of West Bengal or his Representative	Member
5	Secretary, Fisheries Dept., Govt. of West Bengal or his representative	Member
6	Director of Research, Extension & Farms	Member
7	Finance Officer	Member Secretary



ACADEMIC COUNCIL

Sl.No	Composition	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 of all the Faculties	Member
8	One Lecturer, one Reader and one Professor from each Faculty	Member
9	One U.G. student from each Faculty and one P.G. 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

RESEARCH AND EXTENSION EDUCATION COUNCIL

Sl.No	Composition	Position
1	Vice-Chancellor	Chairman
2	Director of Research, Extension & Farms	Member Secretary
3	Director of Veterinary Services and Animal Husbandry, 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

BOARD OF EXAMINATIONS

Sl.No	Composition	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

ORGANIZATION OF MEETINGS:

Sl. No.	Authorities	No. of meeting	Date
1	Executive Council	60th	24/04/2012
2	- Do -	61st	12/06/2012
3	- Do -	62nd	26/06/2012
4	- Do -	63rd	03/08/2012
5	- Do -	64th	17/10/2012
6	- Do -	65th	21/12/2012
7	- Do -	66th	31/01/2013
8	- Do -	67th	25/03/2013
9	- Do -	68th	28/05/2013
10	- Do -	69th	04/07/2013
11	- Do -	70th	18/07/2013
12	- Do -	71st	29/08/2013
13	- Do -	72nd	29/11/2013 & 30/12/2013
14	- Do -	73rd	13/03/2014
15	Finance Committee	31st	20/04/2012
16	- Do -	32nd	12/11/2012
17	- Do -	33rd	06/02/2014



Sl. No.	Authorities	No. of meeting	Date
18	Faculty Council (VAS)		19/04/2012
19	- Do -	-	25/05/2012
20	- Do -	-	31/07/2012
21	- Do -	-	16/10/2012
22	- Do -	-	26/04/2013
23	- Do -	-	28/06/2013
24	- Do -	-	25/11/2013
25	- Do -	-	27/02/2014
26	Faculty Council (Fishery)		28/05/2012
27	- Do -	-	10/08/2012
28	- Do -	-	16/10/2012
29	- Do -	-	20/05/2013
30	- Do -	-	28/06/2013
31	- Do -	-	06/09/2013
32	- Do -	-	27/02/2014
33	Faculty Council (DT)		24/05/2012
34	- Do -	-	01/08/2012
35	- Do -	-	16/10/2012
36	- Do -	-	28/06/2013
37	- Do -	-	16/09/2013
38	Do	-	27/02/2014

**TEACHERS OF THE UNIVERSITY:****Faculty of Veterinary & Animal Sciences:**

Department	Name of the teacher	Qualification	Designation
Veterinary Public Health	Dr. Chanchal Debnath	M.V.Sc., Ph. D	Assistant Professor
Livestock Products Technology	Dr. Subhasis Biswas	M.V.Sc., Ph. D	Professor
Livestock Products Technology	Dr. Debashis Bhattacharjee	M.V.Sc., Ph. D	Lecturer
Livestock Products Technology	Dr. Gopal Patra	M.V.Sc. Ph.D.	Lecturer
Veterinary Medicine, Ethics & Jurisprudence	Prof. N. R. Pradhan	M.V.Sc. Ph.D.	Professor
Veterinary Medicine, Ethics & Jurisprudence	Prof. Samar Sarkar	M.V.Sc. Ph.D.	Professor & Head
Veterinary Medicine, Ethics & Jurisprudence	Dr. Chandan Lodh	M.V.Sc. Ph.D.	Associate Professor
Veterinary & Animal Husbandry Extension Education	Dr. Arunasis Goswami	M. V. Sc., Ph. D., FNAVS, FAPHV, FAST.	Professor
Veterinary & Animal Husbandry Extension Education	Dr. Debasis Ganguli	Ph. D.(Vety. Extension Education)	Lecturer (sr. scale)
Teaching Veterinary Clinical Complex	Dr. P. Mukherjee	Ph.D., Vety. Surgery & Radiology	Asstt. Professor (Vety. Surgery & Radiology)
Teaching Veterinary Clinical Complex	Dr. S. Chaudhuri	Ph.D., Vety. Medicine	Asstt. Professor (Veterinary Medicine)
Teaching Veterinary Clinical Complex	Dr. S. S. Kesh	Ph.D., Vety. Biochemistry	Asstt. Professor (Veterinary Biochemistry)
Veterinary Pathology	Dr S. K. Mukhopadhyay	M.V.Sc., Ph.D.	Associate Professor
Veterinary Pathology	Dr. S. Pradhan	M.V.Sc., Ph.D.	Assistant Professor
Veterinary Pathology	Dr. N. C. Patra	M.V.Sc., Ph.D.	Assistant Professor
Veterinary Pathology	Dr. R. N. Hansda	M.V.Sc.	Assistant Professor
Veterinary Parasitology	Dr. J.D. Ghosh	M.V.Sc. (Vety. Parasitology), Ph.D.	Professor
Veterinary Parasitology	Dr. S. Baidya	M.V.Sc, Ph.D.	Assistant Professor and Head
Veterinary Parasitology	Dr. S.C. Mandal	M.V.Sc. , Ph.D.	Professor
Veterinary Parasitology	Dr. R. Jas	M.V.Sc. , Ph.D.	Assistant Professor



Department	Name of the teacher	Qualification	Designation
Veterinary Parasitology	Dr. S. Pandit	M.V.Sc.	Assistant Professor
Veterinary Microbiology	Dr. S. N. Joardar	MVSc, PhD	Reader
Veterinary Microbiology	Dr. D.P. Isore	MVSc, PhD	Lecturer
Veterinary Microbiology	Dr. Indranil Samanta	MVSc, PhD	Lecturer
Veterinary Microbiology	Dr. Kunal Batabyal	MVSc, PhD	Lecturer
Veterinary Microbiology	Dr. Samir Dey	MVSc, PhD	Lecturer
Instructional Livestock Farm Complex	Prof. Ashis Kumar Samanta	M.V.Sc, PhD	Professor & Incharge (Livestock Production and Mangement)
Instructional Livestock Farm Complex	Dr. Aruna Pal	M.V.Sc, PhD	Assistant Professor (Animal Genetics and Breeding)
Instructional Livestock Farm Complex	Dr. Manik Chandra Pakhira	M.V.Sc, PhD	Assistant Professor (Animal Nutrition)
Instructional Livestock Farm Complex	Mr. Dulal Chandra Roy	M.Sc (Ag)	Assistant Professor (Agronomy)
Veterinary Biochemistry	Dr. Subhasis Batabyal	M.V.Sc., Ph.D.	Associate Professor
Veterinary Biochemistry	Dr. Saibal Chattopadhyay	M.V.Sc., Ph.D.	Reader – Re-employed
Veterinary Epidemiology & Preventive Medicine	Dr. Chanchal Guha	Ph. D.	Professor
Veterinary Epidemiology & Preventive Medicine	Dr. Ujjwal Biswas	Ph.D.	Raeder
Veterinary Epidemiology & Preventive Medicine	Dr. Partha Sarathi Jana	Ph.D.	Lecturer
Animal Nutrition	Dr. T.K. Ghosh	M.V.Sc., Ph.D	Professor
Animal Nutrition	Dr. G. Samanta	M.V.Sc., Ph.D	Professor
Animal Nutrition	Dr. P. Biswas	M.V.Sc., Ph.D	Professor
Animal Nutrition	Dr. Barun Roy	M.V.Sc., Ph.D	Professor
Animal Nutrition	Dr. Amlan Kr. Patra	M.V.Sc., Ph.D	Lecturer
Animal Nutrition	Dr. Guru Prasad Mandal	M.Sc. (Animal Nutrition), Ph.D	Sr.Lecturer
Animal Nutrition	Dr.Paresh Nath Chatterjee	M.Sc. (Animal Nutrition), Ph.D	Asst. Professor
Veterinary Surgery & Radiology	Dr. Asit Kumar Maji	Ph.D	Lecturer



Department	Name of the teacher	Qualification	Designation
Veterinary Surgery & Radiology	Dr. Shyamal Kanti Guha	Ph.D.	Reader
Veterinary Surgery & Radiology	Dr (Mrs) Sarbani Hazra	Ph.D.	Reader
Veterinary Surgery & Radiology	Dr Samit Kumar Nandi	Ph.D.	Reader
Livestock Production Management	Dr. S. Pan	M.Sc. (Dairying), Ph.D.	Professor
Livestock Production Management	Dr. A. K. Samanta	M.V.Sc. (APM), Ph.D.	Professor
Livestock Production Management	Dr. R. Samanta	M.V.Sc. (APM), Ph.D.	Professor
Livestock Production Management	Dr. S. Bera	M.V.Sc. (APM)	Assistant Professor
Veterinary Pharmacology & Toxicology	Dr. Tapan Kumar Mandal	M.V.Sc, Ph.D.	Professor
Veterinary Pharmacology & Toxicology	Dr. Tapas Kumar Sar	M.V.Sc, Ph.D.	Sr. Lecturer
Animal Genetics & Breeding	Prof. P.K.Senapati	M.V.Sc., Ph.D.	Professor
Animal Genetics & Breeding	Prof. A.K.Sahoo	M.V.Sc., Ph.D.	Professor
Animal Genetics & Breeding	Dr. S.Taraphder	M.V.Sc., Ph.D.	Lecturer
Animal Genetics & Breeding	Dr. Manoranjan Roy	M.V.Sc., Ph.D.	Assistant Professor
Animal Genetics & Breeding	Dr. Uttam Sarkar	M.V.Sc., Ph.D.	Assistant Professor
Vaty. Anatomy & Histology	Prof Ranjit Kr.Ghosh	M.V.Sc., Ph.D.	Professor
Vaty. Anatomy & Histology	Prof. Sanjay Ray	M.V.Sc., Ph.D.	Professor
Vaty. Anatomy & Histology	Dr. Partha Das	M.V.Sc., Ph.D, Post Doc (Japan), FIAVA	Reader
Veterinary Physiology	Dr. Pradip Kumar Das	M.V.Sc., Ph.D.	Reader and Head
Veterinary Physiology	Dr. Prabal Ranjan Ghosh	M.V.Sc., Ph.D.	Lecturer (Sr.)
Veterinary Physiology	Dr. Kinsuk Das	M.V.Sc.	Lecturer
Veterinary Physiology	Dr. Dipak Banerjee	M.V.Sc., Ph.D.	Lecturer
Veterinary Physiology	Dr. Joydip Mukherjee	M.V.Sc., Ph.D.	Lecturer
Veterinary Gynaecology Obstetrics	Prof.(Dr.)Siddhartha Basu	M.V.Sc., Ph.D.	Professor
Veterinary Gynaecology Obstetrics	Dr. Uttam Datta	M.V.Sc., Ph.D.	Reader
Veterinary Gynaecology Obstetrics	Dr.(Mrs.) Kalyani Ray	M.V.Sc., Ph.D.	Reader
Veterinary Gynaecology Obstetrics	Dr. Pramode Ranjan Nandi	M.V.Sc., Ph.D.	Sr. Lecturer



Department	Name of the teacher	Qualification	Designation
Veterinary Gynaecology Obstetrics	Dr. Shyamal Kumar Roy	M.V.Sc. Ph.D	Professor (reemployed)
Fish Processing Technology	Dr. Krushna Chandra Dora	M.F.Sc., Ph.D.	Professor
Fish Processing Technology	Dr. Sreekanta Sarkar	M.F.Sc., Ph.D.	Associate Professor
Fish Processing Technology	Mr. Supratim Chowdhury	M.F.Sc.	Assistant Professor
Fishery Resource Management	Prof. Sudhir Kumar Das	M.F.Sc., Ph.D., D.D.E.	Professor
Fishery Resource Management	Dr. Nagesh T.S.	M.F.Sc., Ph.D.	Reader
Fishery Resource Management	Dr. Samarendra Behera	M.F.Sc., Ph.D.	Reader
Aquatic Environment Health	Dr. Raman Kumar Trivedi	M.F.Sc., Ph.D.	Professor
Aquatic Environment Health	Dr. Bipul Kumar Das	M.Sc., Ph.D.	Professor
Aquatic Environment Health	Dr. Sangram Keshari Rout	M.F.Sc., Ph.D	Associate Professor
Aquaculture	Dr. Tapas Kumar Ghosh	M. Sc; Ph.D	Reader
Aquaculture	Dr. Shib Kinkar Das	M. Sc; Ph.D	Reader
Fishery Engineering	Dr.N.A.Talwar	M.F.Sc., Ph.D.	Reader
Fishery Extension	Prof. Shyamsundar Dana	M.V.Sc , Ph.D	Professor
Aquatic Animal Health	Dr. T. J. Abraham	M.F.Sc., Ph.D.	Professor (Fish Microbiology)
Aquatic Animal Health	Dr. Gadadhar Dash	M.F.Sc., Ph.D.	Reader (Fish Pathology)
Fishery Economics & Statistics	Dr. Somen Sahu	M.Sc., MBA, Ph. D	Reader
Fishery Economics & Statistics	Dr. Anandamoy Mondal	M.F.Sc., Ph.D	Reader
Dairy Engineering	Dr. P. Maity	M.Sc., Ph. D	Reader
Dairy Engineering	Dr. P.K.Roy	M.Tech, Ph.D	Sr. Lecturer
Dairy Engineering	Dr. S.K. Bag	M.Tech, Ph.D	Reader
Dairy Chemistry	Dr. A.K.Bandyopadhyay	Ph.D. (DC)	Professor
Dairy Chemistry	Dr. P K Ghatak	Ph.D. (DC)	Professor
Dairy Chemistry	Dr. P.R.Ray	Ph.D. (DC)	Reader
Dairy Microbiology	Dr. T. K. Maity	Ph. D. (Dairy Microbiology)	Professor
Dairy Microbiology	Dr. S. P. Sarkar	Ph. D. (Dairy Microbiology)	Professor: Re-employed
Dairy Technology	Dr. Malay Kumar Sanyal	Ph. D	Professor
Dairy Technology	Dr. Sunil Chandra Pal	Ph. D, Post Doctor Research	Professor
Dairy Technology	Dr. Sisir Kr. Gangopadhyay	Ph. D	Professor
Dairy Technology	Dr. Dulal Chandra Sen	Ph. D	Professor



RETIRED EMPLOYEES DURING 2012-14

Sl. No.	Name	Date of Retirement	Category
1	Dr. Sunil Chandra Pal	30.04.2012	Teacher
2	Dr. Sukhendu Prasad Roy	31.05.2012	Officer
3	Sri Shyamal Mukherjee	30.04.2012	Teacher
4	Smt. Bandana Mitra	30.06.2012	Non teaching
5	Sri Gour Chandra Das	30.06.2012	Non teaching
6	Smt. Sabita Shaw	31.10.2012	Non teaching
7	Dr. Dipak Kumar De	31.05.2013	Teacher
8	Dr. Pijush Kanti Ghatak	31.08.2013	Teacher
9	Dr. Sisir Kumar Gangopadhyay	31.10.2013	Teacher
10	Sri Rangalal Dom	31.03.2013	Non teaching
11	Sri Golap Chand Barman	30.06.2013	Non teaching
12	Sri Bipul Chandra Das	30.06.2013	Non teaching
13	Sri Raghunath Dhara	31.10.2013	Non teaching
14	Dr. Nishith Ranjan Pradhan	31.01.2014	Teacher
15	Smt. Rajkali Singh	31.01.2014	Non teaching
16	Sri Mushtaque Ahmed	28.02.2014	Non teaching

SC/ST CELL /(BCW CELL):

SC/ST (BCW) Cell has been established for monitoring & implementing the reservation policies of the Government of West Bengal after approval of the same from the 63rd meeting of the Executive Council held on 03.08.2012 followed by a Notification No. WBUAFS/Admn/S-6(Pt-I)/0787 dated 20.09.2012 from the office of the Registrar, WBUAFS with the following members:

- | | |
|--|-------------------|
| (i) Prof. C.S.Chakrabarti, Vice-Chancellor | - Chairman |
| (ii) Sri Shyamal Cattoadhyay, Finance Officer | - Liaison Officer |
| (iii) Prof. P.Biswas, Registrar | - Member |
| (iv) Secretary, BCW Dept. | - Member |
| (v) Secretary, ARD Dept. | - Member |
| (vi) Sri Tarun Saha, Chairman, Borough-I, KMC | - Member |
| (vii) Sri Sujit Barua, Deputy Registrar | - Member |
| (viii) Dr. Pankaj Kumar Biswas, Deputy Registrar | - Member |
| (ix) Dr. B.K.Biswas, Scientist | - Member |
| (x) Dr. Samar Halder, Reader | - Member |
| (xi) Dr. (Mrs.) Kalyani Ray, Reader | - Member |
| (xii) Dr. S. Bag, Reader | - Member |
| (xiii) Dr. N.A.Talwar, Reader | - Member |
| (xiv) Sri Kishalaya Mandal, Jn. Store Keeper | - Member |
| (xv) Sri Ramesh Baskey, Farash | - Member |
| (xvi) General Secretary, SU, F/o-VAS, FS & DT | - Member |



STAFF POSITION OF THE UNIVERSITY:

PROFILE OF NON-TEACHING POST:

Sl. No.	Type of post	Sanctioned Post	Filled up	Vacant	Male	Female	General	SC	ST	OBC	PH
1	Technical Assistant II	20	20	0	18	2	13	4	1	1	1
2	Compounder	3	1	2	1	0	1	0	0	0	0
3	Field Assistant	3	1	2	1	0	1	0	0	0	0
4	Ambulance Attendant	2	2	0	2	0	1	1	0	0	0
5	Cash Assistant	4	4	0	4	0	2	1	1	0	0
6	Computer Operator	1	1	0	0	1	1	0	0	0	0
7	Driver cum Mechanic	6	3	3	3	0	1	1	1	0	0
8	Durwan	34	1	33	1	0	0	1	0	0	0
9	Farash	6	6	0	5	1	4	1	1	0	0
10	Fisherman	5	4	1	4	0	2	1	1	0	0
11	Gymnasium Attendant	1	1	0	1	0	1	0	0	0	0
12	Junior Animal Keeper	27	21	6	17	4	15	3	1	1	1
13	Junior Assistant	63	47	16	41	6	31	10	3	3	0
14	Junior Cyclostyle Operator	1	1	0	1	0	1	0	0	0	0
15	Junior Stenographer	2	2	0	2	0	2	0	0	0	0
16	Junior Storekeeper	5	4	1	4	0	2	1	1	0	0
17	Laboratory Attendant	56	37	19	30	7	28	5	1	2	1
18	Sweeper	43	23	20	18	5	18	2	1	1	1
19	Office Attendant	103	68	35	55	13	53	9	2	3	1
20	Vistiman	1	1	0	0	1	1	0	0	0	0
21	Mess Worker	32	32	0	32	0	32	0	0	0	0
	Total	418	280	138	240	40	210	40	14	11	5



PROFILE OF OFFICER POST:

Sl. No.	Type of post	Sanctioned Post	Filled up	Vacant	Male	Female	General	SC	ST	OBC	PH
1	Vice-Chancellor	1	1	0	1	0	1	0	0	0	0
2	Registrar	1	0	1	0	0	0	0	0	0	0
3	Director of Res., Ext., & Farms	1	0	1	0	0	0	0	0	0	0
4	Dean, Vety. & Ani. Scs	1	0	1	0	0	0	0	0	0	0
5	Dean, Fishery Scs	1	0	1	0	0	0	0	0	0	0
6	Dean, Dairy Scs	1	0	1	0	0	0	0	0	0	0
7	Controller of Examinations	1	0	1	0	0	0	0	0	0	0
8	Finance Officer	1	1	0	1	0	1	0	0	0	0
9	Librarian	1	0	1	0	0	0	0	0	0	0
10	Dean Student Welfare	1	0	1	0	0	0	0	0	0	0
11	Secretary, FC	1	1	0	1	0	1	0	0	0	0
12	Deputy Registrar	2	2	0	2	0	1	1	0	0	0
13	Deputy Director (Research)	2	0	2	0	0	0	0	0	0	0
14	Deputy Librarian	1	1	0	1	0	1	0	0	0	0
15	Scientist	2	2	0	1	1	1	1	0	0	0
16	Farm Manager	1	1	0	1	0	1	0	0	0	0
17	Computer Programmer	1	1	0	0	1	1	0	0	0	0
18	Assistant Director of Research	1	0	1	0	0	0	0	0	0	0
19	Assistant Director of Extension	1	0	1	0	0	0	0	0	0	0
20	Assistant Director of Farm	1	1	0	1	0	1	0	0	0	0
21	Assistant Registrar	1	1	0	1	0	1	0	0	0	0
22	Assistant Finance Officer	2	2	0	2	0	2	0	0	0	0
23	Medical Officer	1	1	0	1	0	1	0	0	0	0
24	Assistant Librarian	1	1	0	0	1	1	0	0	0	0
25	Sports Officer	1	0	1	0	0	0	0	0	0	0
26	Security cum Estate Officer	1	0	1	0	0	0	0	0	0	0
27	Law Officer	1	0	1	0	0	0	0	0	0	0
	Total	31	16	15	13	3	14	2	0	0	0


PROFILE OF TEACHING POST (LECTURER / ASSTT. PROFESSOR) :

Sl. No.	Department	Sanctioned Post	Filled up	Vacant
1	Animal Genetics & Breeding	5	5	0
2	Animal Nutrition	5	5	0
3	Livestock Production Management	5	5	0
4	Instructional Livestock Farm Complex	4	3	1
5	Teaching Veterinary & Clinical Complex	4	3	1
6	Livestock Products Technology	2	2	0
7	Veterinary Epidemiology & Preventive Medicine	2	2	0
8	Veterinary Medicine, Ethics & Jurisprudence	3	2	1
9	Veterinary Public Health	2	1	1
10	Veterinary Biochemistry	3	2	1
11	Veterinary Animal Husbandry, Extension Education	1	1	0
12	Veterinary Anatomy & Histology	4	2	2
13	Veterinary Gynaecology & Obstetrics	5	3	2
14	Veterinary Microbiology	5	5	0
15	Veterinary Parasitology	3	3	0
16	Veterinary Pathology	5	4	1
17	Veterinary Pharmacology & Toxicology	2	2	0
18	Veterinary Physiology	5	5	0
19	Veterinary Surgery & Radiology	5	5	0
20	Dairy Chemistry	2	2	0
21	Dairy Engineering	3	3	0
22	Dairy Technology	3	3	0
23	Dairy Microbiology	2	1	1
24	Aquaculture	2	1	1
25	Aquatic Animal Health	2	1	1
26	Aquatic Environment Management	2	1	1
27	Fish Processing Technology	2	2	0
28	Fisheries Resource Management	2	2	0
29	Fishery Economics, Statistics & Marketing	2	2	0
30	Fishery Engineering	2	1	1
31	Fishery Extension	2	0	2
	Total	96	79	17

**PROFILE OF TEACHING POST (READER / ASSOCIATE PROFESSOR) :**

Sl. No.	Department	Sanctioned Post	Filled up	Vacant
1	Animal Genetics & Breeding	2	1	1
2	Animal Nutrition	1	1	0
3	Livestock Production Management	2	0	2
4	Instructional Livestock Farm Complex	1	0	1
5	Teaching Veterinary & Clinical Complex	1	0	1
6	Veterinary Public Health	1	0	1
7	Veterinary Biochemistry	1	0	1
8	Veterinary Animal Husbandry, Extension Education	1	0	1
9	Veterinary Anatomy & Histology	1	0	1
10	Veterinary Gynaecology & Obstetrics	1	1	0
11	Veterinary Microbiology	1	0	1
12	Veterinary Parasitology	1	1	0
13	Veterinary Pharmacology & Toxicology	2	0	2
14	Veterinary Physiology	1	0	1
15	Veterinary Surgery & Radiology	1	0	1
16	VMEJ	1	0	1
17	Dairy Engineering	1	0	1
18	Dairy Technology	1	0	1
19	Dairy Microbiology	1	0	1
20	Aquaculture	1	1	0
21	Aquatic Animal Health	1	1	0
22	Aquatic Environment Management	1	1	0
23	Fish Processing Technology	1	0	1
24	Fisheries-Resource Management	1	1	0
25	Fishery Economics, Statistics & Marketing	1	0	1
26	Fishery Engineering	1	0	1
27	Fishery Extension	1	0	1
	Total	30	8	22


PROFILE OF TEACHING POST (PROFESSOR) :

Sl. No.	Department	Sanctioned Post	Filled up	Vacant
1	Animal Genetics & Breeding	1	1	0
2	Animal Nutrition	1	1	0
3	Livestock Production Management	1	0	1
4	Instructional Livestock Farm Complex	1	0	1
5	Teaching Veterinary & Clinical Complex	1	0	1
6	Livestock Products Technology	1	1	0
7	Veterinary Epidemiology & Preventive Medicine	1	1	0
8	Veterinary Public Health	1	0	1
9	Veterinary Biochemistry	1	0	1
10	Veterinary Animal Husbandry, Extension Education	1	1	0
11	Veterinary Anatomy & Histology	2	1	1
12	Veterinary Gynaecology & Obstetrics	1	1	0
13	Veterinary Microbiology	1	0	1
14	Veterinary Parasitology	1	0	1
15	Veterinary Physiology	1	0	1
16	Veterinary Surgery & Radiology	1	1	0
17	VMEJ	1	0	1
18	Veterinary Pathology	1	0	1
19	Dairy Chemistry	2	1	1
20	Dairy Engineering	1	0	1
21	Dairy Technology	1	1	0
22	Dairy Microbiology	1	1	0
23	Aquaculture	1	1	0
24	Aquatic Animal Health	1	0	1
25	Aquatic Environment Management	1	1	0
26	Fish Processing Technology	1	1	0
27	Fisheries Resource Management	1	0	1
28	Fishery Economics, Statistics & Marketing	1	0	1
29	Fishery Engineering	1	0	1
30	Fishery Extension	1	1	0
	Total	32	15	17

3

EDUCATION :

ACADEMIC PROGRAMMES (FACULTY WISE)

The West Bengal University of Animal and Fishery Sciences offers the following courses in the three faculties are as follows:

- ❖ Faculty of Veterinary and Animal Sciences :
 - ❑ Bachelor of Veterinary Sciences & Animal Husbandry (B.V.Sc. & A.H.)
 - ❑ Master of Veterinary Sciences (M.V.Sc.)
 - ❑ Doctor of Philosophy (Ph.D.) in Veterinary Sciences
- ❖ Faculty of Fishery Sciences :
 - ❑ Bachelor of Fishery Sciences (B.F.Sc.)
 - ❑ Master of Fishery Sciences (M.F.Sc.)
 - ❑ Doctor of Philosophy (Ph.D.) in Fishery Sciences
- ❖ Faculty of Dairy Technology
 - ❑ Bachelor of Dairy Technology [B. Tech. (D.T)]
 - ❑ Master of Dairy Technology [M. Tech. (D.T)]
 - ❑ Doctor of Philosophy (Ph.D.) in Dairy Technology

In B.V.Sc. & A.H. course curricula, VCI courses are followed & the academic rules & regulations are followed as per VCI.

In B.Tech (D.T) course under the Faculty of Dairy Technology, ICAR and AICTE curricula are followed & the rules & regulations are followed as per ICAR.

In B.F.Sc. course, in the Faculty of Fishery Science, the course curricula and the rules and regulations are followed as per ICAR.

The Post graduate and Ph.D. programmes in the three faculties are conducted as per ICAR course curricula and the regulations are followed as per the regulations of the University.

NUMBER OF ACADEMIC PROGRAMMES OFFERED BY DIFFERENT FACULTIES:

Sl No.	Faculty	No. of Deptt.	Number of Degree (Name) Programmes		
			U.G	P.G	Ph.D
1.	Veterinary & Animal Sciences	19	01 (B.V.Sc. & A.H)	17 (M.V.Sc)	17
2.	Dairy Technology	04	01 (B.Tech in Dairy Tech)	04 (M.Tech. in Dairy Tech)	03
3.	Fishery Sciences	08	01 (B.F.Sc)	07 (M.F.Sc)	02



ACADEMIC DEPARTMENTS IN THE FACULTIES OF THE UNIVERSITY:

VETERINARY & ANIMAL SCIENCES	DAIRY TECHNOLOGY	FISHERY SCIENCES
1. Veterinary Anatomy & Histology	1. Dairy Chemistry	1. Aquatic Animal Health
2. Veterinary Pathology	2. Dairy Microbiology	2. Fishery Resource Management
3. Veterinary Parasitology	3. Dairy Engineering	3. Fishery Extension
4. Veterinary Pharmacology & Toxicology	4. Dairy Technology	4. Aquatic Environment Management
5. Veterinary Physiology		5. Fishery Economics & Statistics
6. Veterinary Biochemistry		6. Fishery Engineering
7. Veterinary Microbiology		7. Aquaculture
8. Veterinary Public Health		8. Fish Processing Technology
9. Veterinary Epidemiology & Preventive Medicine		
10. Veterinary Gynaecology & Obstetrics		
11. Veterinary Surgery & Radiology		
12. Veterinary & Animal Husbandry Extension Education		
13. Veterinary Medicine, Ethics & Jurisprudence		
14. Animal Genetics & Breeding		
15. Animal Nutrition		
16. Livestock Production Management		
17. Livestock Products Technology		
18. Teaching Veterinary Clinical Complex		
19. Instructional Livestock Farm Complex		

1. ADMISSION CRITERIA :

UG PROGRAMME

The Candidates who have passed the Higher Secondary Examination (10+2) or equivalent in Science with Physics, Chemistry, Biology, English & Vernacular altogether with 50% marks for general & 40% marks for SC/ST are eligible for admission in B.V.Sc. & A.H. course, but they are to undergo a special Entrance Examination (EVETS) conducted by the West Bengal Joint Entrance Examination Board (WBJEEB) for ranks in the merit list.

For admission in B.Tech (Dairy Technology) course, candidates are to pass the Higher Secondary Examination (10+2) or equivalent with Physics, Chemistry, Mathematics, English & Vernacular with at least 50%



marks altogether for general & 40% altogether for SC/ST candidates. Besides, they are also to qualify in the West Bengal Joint Entrance Examination in the Engineering group.

And for admission in B.F.Sc. programme, the students are directly admitted without any Entrance Examination but as per the merit list after qualifying with minimum 50% marks altogether in Physics, Chemistry, Biology, English & Vernacular for general candidates and 40% marks for SC/ST candidates.

Besides, the candidates must be the domicile of West Bengal and must attain 17 years of age as on 1st July in the year of application.

NUMBER OF SEATS & RESERVATION

Total number of seats for 3 courses :

a) B.V.Sc. & A.H.	-	60
b) B.Tech (DT)	-	30
c) B.F.Sc.	-	32

Out of total no. of seats, 22% seats are reserved for SC and 6% for ST candidates. In B.V.Sc. & A.H. course, 15% seats (9nos.) are reserved for VCI nominees and 4 seats each of B.Tech. (DT) & B.F.Sc. courses are kept reserved for ICAR nominees. Besides 3% of seats of each courses are kept reserved for physically challenged candidates on horizontal basis.

Mode of admission is through counseling of the eligible candidates from the merit list of West Bengal Joint Entrance ranks.

PG & Ph.D. PROGRAMME

For admission in Masters degree programmes in the University like, M.V.Sc., M.Sc.(Dairying), M.Tech.(D.T) or M.F.Sc. courses, the candidates are to get minimum of 6.2 Grade Point Average(GPA) for general category & 6.0 for SC & ST categories in 10 point scale in their B.V.Sc. & A.H., B.Tech(DT) & B.F.Sc. courses. Besides, they are to appear before the Interview Boards of the department for Personal Interviews for final selection.

Similarly, for selection of the Ph.D candidates in the three faculties, they are to acquire minimum of 6.75 Grade Point Average (GPA) in the respective Masters Degree disciplines. Besides for selection of candidates, they are to qualify in the written examinations conducted by a duly constituted committee as well as they are to appear in the Personal Interviews for being selected in the Merit list. In the selection, equal weightage is given to the written examination and the Personal Interviews.

NUMBER OF SEATS & RESERVATION

Total no. of seats in P.G. programme in each department in an academic year is calculated in the ratio of 1:2 (Teacher eligible to guide a student : Number of Students) and also considering the availability of infrastructural facilities in a department and to a maximum of 6 nos. Out of these seats, reservation is followed as per State Government rules, besides 1 seat is kept reserved for ICAR.

In Ph.D. programme in a department, total no. of seats in academic year are considered depending on the ratio of 1:1 (Teacher eligible to guide a student : Number of Students) and to a maximum of 3 in a Department. Reservation of seats is followed as per State Government rules.



Students Intake Profile: (2012-2013)

Course	Level	Number of Students Intake (Caste & Sex wise)							
		General		SC		ST		Total	
		M	F	M	F	M	F	M	F
B.V.Sc. & A.H.	U.G.	33	06	10	03	04	01	47	10
M.V.Sc.	P.G.	23	12	06	01	01	03	30	16
Ph.D. in Vety. & Animal Science	Ph.D.	15	06	0	01	01	0	16	07
B.F.Sc.	U.G.	20	02	05	02	01	02	26	06
M.F.Sc.	P.G.	14	05	03	04	01	0	18	09
Ph.D. in Fishery Science	Ph.D.	03	0	01	01	01	0	05	01
B.Tech (D.T)	U.G.	15	02	02	01	0	0	17	03
M.Tech (D.T)	P.G.	03	01	02	01	0	0	05	02
Ph.D. in Dairy Technology	Ph.D.	0	0	01	0	0	0	01	0

Students Out-turn Profile: (2012)

Course	Level	Number of Students Passed out (Sex wise)		
		M	F	Total
B.V.Sc. & A.H.	U.G.	19	08	27
M.V.Sc.	P.G.	35	10	45
Ph.D. in Vety. & Animal Science	Ph.D.	09	04	13
B.F.Sc.	U.G.	22	07	29
M.F.Sc.	P.G.	07	05	12
Ph.D. in Fishery Science	Ph.D.	0	0	0
B.Tech (D.T)	U.G.	15	06	21
M.Tech (D.T)	P.G.	03	01	04
Ph.D. in Dairy Technology	Ph.D.	0	0	0



Students Intake Profile: (2013-2014)

Course	Level	General		Number of Students Intake (Caste & Sex wise)					
				SC		ST		Total	
		M	F	M	F	M	F	M	F
B.V.Sc. & A.H.	U.G.	33	02	11	02	02	01	46	05
M.V.Sc.	P.G.	27	06	02	0	0	0	29	06
Ph.D. in Vety. & Animal Science	Ph.D.	16	03	01	01	01	0	18	04
B.F.Sc.	U.G.	17	05	06	01	03	0	26	06
M.F.Sc.	P.G.	14	07	05	02	01	0	20	07
Ph.D. in Fishery Science	Ph.D.	06	05	01	0	0	0	07	05
B.Tech (D.T)	U.G.	15	01	03	0	01	0	19	01
M.Tech (D.T)	P.G.	06	03	02	0	0	0	08	03
Ph.D. in Dairy Technology	Ph.D.	01	0	01	0	0	0	02	0

Students Out-turn Profile: (2013)

Course	Level	Number of Students Passed out (Sex wise)		
		M	F	Total
B.V.Sc. & A.H.	U.G.	20	04	24
M.V.Sc.	P.G.	35	09	44
Ph.D. in Vety. & Animal Science	Ph.D.	09	05	14
B.F.Sc.	U.G.	17	07	24
M.F.Sc.	P.G.	14	05	19
Ph.D. in Fishery Science	Ph.D.	0	0	0
B.Tech (D.T)	U.G.	24	0	24
M.Tech (D.T)	P.G.	03	01	04
Ph.D. in Dairy Technology	Ph.D.	0	0	0



ACADEMIC FEE STRUCTURE :

(A) UG Programme:

For Day scholars – Rs. 6760.00 and for Hostellers – Rs. 12,060.00

(B) PG Programme:

Fee structure (Rs.) for admission in PG & PhD courses

For Day scholars				For Hostellers			
Within the University		Outside the University		Within the University		Outside the University	
PG	PhD	PG	PhD	PG	PhD	PG	PhD
3650.00	5550.00	21950.00	29950.00	5750.00	7750.00	29150.00	38450.00

Semester fees (Rs.) (Recurring) for PG & PhD students -

For Day scholars				For Hostellers			
Within the University		Outside the University		Within the University		Outside the University	
PG	PhD	PG	PhD	PG	PhD	PG	PhD
2150.00	3650.00	15000.00	20800.00	2750.00	4250.00	17700.00	23800.00

Start of Academic session :

Start of Academic Session for UG is in July; for PG is in August-September and for Ph.D. is in November-December every years.

MISSIONS OF THE UNIVERSITY:

- All the UG and PG Class rooms in the three faculties have been facilitated with modern Audio-Visual Aids,
- Experimental learning programmes undertaken in the faculties,
- Establishment of Central examination hall,
- Set up of Modern educational museum,
- The online publication of results has been introduced for Undergraduate examinations in the three faculties of the University in the website of Controller of Examinations, WBUAFS - www.wbuafsce.org and also through the web address www.exametc.com, which is also linked with the University website: <http://wbuafscl.ac.in>

Students' hostels –

Furnished hostels set up at the three campuses of the University.

**No. of hostels with their capacities available at three campuses of the University**

Belgachia, Kolkata				Chakgaria, Kolkata				Mohanpur, Nadia			
Boys		Girls		Boys		Girls		Boys		Girls	
No.	Capacity	No.	Capacity	No.	Capacity	No.	Capacity	No.	Capacity	No.	Capacity
4	228	1	81	2	120	1	45	2	420	2	77

NATIONAL SERVICE SCHEME (NSS) :**Programmes Completed under NSS :**

- Animal Health Camp at Rangabelia and Chandanpiri of Namkhana of Sunderbans, South 24 Pargans district. Health Camp cum vaccination programmer at Lodhasuli, Jhargram, West Midnapore.
- Scientific awareness on Organic Food Production on the day of foundation of the University.
- Essay competition to communicate commonwealth Game and its spirit to develop international understanding. Three Prizes have been awarded.

On-going programmes under NSS :

- Organisation of Animal health programme,
- One for awareness of Deworming and vaccination camp, in collaboration Animal Resource Development Department, Govt. West Bengal
- General treatment and Surgical health camp
- Effort is being given to find out a village for adoption,
- Flower garden has been furnished at Kolkata, Belgachia in the main campus of the University,
- Organisation of Seminar,
- Scientific awareness programme,
- Regular activities like Blood donation camp



Prof. Abhijit Sen handing over the certificate of honour to an awardee during the 8th Convocation



Hon'ble Chancellor, Sri M K Narayanan along with Prof. Abhijit Sen, Chief Guest, Prof. C S Chakrabarti, Vice Chancellor and other officials during the 8th Convocation.



Prof. Abhijit Sen, Chief Guest delivering the 8th Convocation address. Other dignitaries sitting on the dais.



Students' participation in 14th AGRIUNIFEST, 2014 at Bangalore



Inaugural Programme of the University Central Sports - 2013



4th in quiz competition in 13th AGRIUNIFEST, 2013



VC & DSW with team members of 13th AGRIUNIFEST, 2013



TEAM MEMBERS in front of Central Library



Students' participation in 14th All India Inter Agricultural University Festival at Bangalore



Students' participation in 13th All India Inter Agricultural University Festival at Jabalpur, MP





**List of thesis (year-wise) submitted by the students for the award of degree
(P.G / Ph.D.) during 2012-13 & 2013-14**

Department of Veterinary Medicine, Ethics & Jurisprudence:

Name of student	Title of thesis	Year of submission	Name of guide	Name of degree
Banajit Talukdar	Studies on some aspects of Cryptosporidial Diarrhoea in Cattle.	2012	Dr. Chandan Lodh	M.V.Sc.
Surojit Das	Studies on some aspect of diabetes in dog and its therapy with special reference to indigenous antidiabetic agent momordica charantia	2012	Dr. Chandan Lodh	M.V.Sc.
Suparna Das	Occurrence and characterisation of bacterial dermatitis in dogs with special reference to therapeutic approaches using honey.	2013	Dr. Chandan Lodh	M.V.Sc.
Ali Md. Waliullah	Occurrence and characterisation of multi drug resistant e.coli in clinical and subclinical Bovine Mastitis with special reference to therapeutic approaches using Herbal components.	2013	Prof. Samar Sarkar	M.V.Sc.
Sunil Kumar	Clinico-pathological Studies of Clinical mastitis in cows with special reference to therapeutic management.	2012	Prof. N. R. Pradhan	M.V.Sc.
Shampa Chakraborty	Dermatitis in dogs with special reference to Demodicosis.	2012	Prof. N. R. Pradhan	M.V.Sc.
Madhurima Sarkar	Acute Bacterial nephritis in dogs with special reference to its herbal therapy.	2013	Prof. N. R. Pradhan	M.V.Sc.
Subhamoy Chanda	Acute Bacterial Enteritis in pups and its treatment.	2013	Prof. N. R. Pradhan	M.V.Sc.



Name of student	Title of thesis	Year of submission	Name of guide	Name of degree
Annapurna Singha	Bovine subclinical mastitis in and around Kolkata and its therapeutic management with special reference to evaluation of Oxidative stress	2013	Prof. N. R. Pradhan	P.h.D
Nayan Kumar Batul	Studies on prevalence of MRSA in cattle suffering from Clinical and Subclinical Mastitis.	2014	Prof. N. R. Pradhan	P.h.D
Sumana Sadhukhan	Studies on the efficacy of essential fatty acid on spontaneous alopecia and pruritus in dog	2013	Prof. Amalendu Chakrabarti	M.V.Sc.

Department of Veterinary Pathology:

Name of student	Title of thesis	Year of submission	Name of guide	Name of degree
Chandrakanta Jana	Molecular Characterization of Duck Enteritis Virus Isolates With Their Pathobiological Studies in Duck	2013	Dr. S.K. Mukhopadhyay,	Ph.D
S. Ramesh	Effect of Andrographis Paniculata Extract on Experimental Autoimmune Encephalomyelitis	2013	Dr. S.K. Mukhopadhyay,	Ph.D
Indrajit Kar	Toxicopathological Evaluation of Heavy Metals (cd, pb, cu, co) In Poultry Birds And Goats Reared In An Industrial Area, West Bengal.	2013	Dr. S.K. Mukhopadhyay,	Ph.D
Dr. S. Pradhan	Clinicopathomorphological Studies On Murine Toxoplasmosis And Evaluation of PCR Based Diagnosis With Special Reference To Molecular Characterization of Toxoplasma gondii SAG2 GENE	2013	Dr. S.K. Mukhopadhyay,	Ph.D
Joydeb Goswami	Assessment of In-vitro Activity of Nano Zn Against Taeniasolium Cysts With Pathobiological Effect In Mice	2012	Dr. S.K. Mukhopadhyay,	M.V.Sc
Utpal Saikia	Induced Murine (Mus Muscularis) Amyloidosis: Clinicopathological, Pathomorphological, Histochemical and Fluorescence Studies	2012	Dr. N. C. Patra	M.V.Sc



Name of student	Title of thesis	Year of submission	Name of guide	Name of degree
ParthaSarathi Mandal	Clinicopathomorphological Studies and Nested PCR Based Diagnosis of Duck Enteritis Virus in Indigenous Duck	2013	Dr. S.K. Mukhopadhyay,	M.V.Sc
Piyush Barman	Studies on Pathobiological and Bacteriological Effects of Probiotics on Broiler Birds	2013	Dr. S.K. Mukhopadhyay,	M.V.Sc
Md. Farooque Husain	Induced herpes virus type-1 infection in duck (<i>Anas platyrhynchos domesticus</i>); Clinicopathological, Ultrastructural and immunohistochemical studies.	2013	Dr. N. C. Patra	M.V.Sc

Department of Veterinary Parasitology:

Name of student	Title of thesis	Year of submission	Name of guide	Name of degree
Lalchawimawia Ralte	Molecular cloning and characterization of partial sequence of 18S rRNA gene of <i>Isospora</i> spp. and repeated sequence of <i>Toxoplasma gondii</i>	2012	Dr. S. Baidya	M.V.Sc.
Rakesh Ranjan	Prevalence of gastrointestinal parasitic load in goat of two agro-climatic zones of West Bengal with special reference to prediction of parasitic infection level through mathematical model	2012	Dr. S. Baidya	M.V.Sc.
Dhananjay Kumar	Molecular characterization of partial sequence of B1 gene of <i>Toxoplasma gondii</i> and serodetection of toxoplasmosis in backyard poultry birds in West Bengal	2012	Dr. S. Baidya	Ph. D.
Michael Lalramhluna	Comparative haemato-biochemical and immune response of Garole sheep against artificially induced haemonchosis	2013	Dr. J.D. Ghosh	M.V.Sc.
Mrinal Kanti Das	Studies on canine babesiosis in and around kolkata: molecular diagnosis, clinico-epidemiological features and haematobiochemical impact	2013	Dr. S. Baidya	M.V.Sc.
Supradip Das	Studies on antigen cross reactivity between <i>Haemonchus contortus</i> and <i>Bunostomum trigonocephalum</i> of sheep	2013	Dr. J.D. Ghosh	M.V.Sc.
Anupam Brahma	Studies on prevalence of gastrointestinal parasites in small ruminants and occurrence of benzimidazole resistance using in vivo, in vitro and molecular methods	2013	Dr. R. Jas	M.V.Sc.



Department of Veterinary Microbiology:

Name of student	Title of thesis	Year of submission	Name of guide	Name of degree
Biswajit Bartkataki	Exploring the Prevalence of Bluetongue in Assam-A Maiden Venture	2012	Dr. S. N. Joardar	M.V.Sc.
Achintya Banik	Isolation, identification and characterization of E. coli from diarrhoeic and non-diarrhoeic cases of dogs of South Bengal	2012	Dr. D. P. Isore	M.V.Sc.
Nilofar Yeasmin	Approaches to Develop Better Sero-Diagnostic Tools for Newcastle Disease	2013	Dr. S. N. Joardar	M.V.Sc.
Bithi Ray	Immunobiological and Molecular Characterization of Fowl Pox Virus Isolated from Chickens Reared Under Backyard System of Management	2013	Dr. S. N. Joardar	M.V.Sc.
Sudip Nandi	Immunobiological Characteristics of Extended-Spectrum- β -Lactamase-Producing Escherichia coli in Different Breeds of Poultry	2013	Dr. S. N. Joardar	M.V.Sc.
Atanu Bhandari	Evaluation of tuberculin test in comparison with isolation of organism and detection of viability of molecular assay in case of bovine Tuberculosis	2013	Dr. D. P. Isore	M.V.Sc.
Anjan Mondal	Identification and Molecular Characterization of Major Microbial Pathogens from Diarrhoeic Calves Piglets and Children	2013	Dr. S. N. Joardar	Ph.D.
Indranil Samanta	Molecular Characterization and Antibiotic resistance pattern Analysis of Salmonella and Escherichia coli Isolated from Backyard Poultry Management System in West Bengal as a part Formulate Suitable Biosecurity Strategies	2013	Dr. S. N. Joardar	Ph.D.
Indira Paul	Isolation, identification and molecular characterization of multiple drug resistant strains of Staphylococcus and Streptococcus species from bovine mastitis	2013	Dr. D. P. Isore	Ph.D.


Department of Veterinary Epidemiology & Preventive Medicine:

Name of student	Title of thesis	Year of submission	Name of guide	Name of degree
Dr. Lalita Sharma	Studies on seroconversion of live attenuated lentogenic strain ND vaccine (local isolate) through drinking water in broiler birds	2012	Dr. Ujjwal Biswas	M.V.Sc.
Dr. Debdyuti Chakrobarty	Studies on thermostability of Newcastle Disease virus (local isolate) for preparation of vaccine.	2013	Prof. Chanchal Guha	M.V.Sc.
Dr. Arnab Das	Epidemiological studies of subclinical mastitis in cattle in an around Kolkata with special reference to advance diagnostic technique	2014	Prof. Chanchal Guha	Ph. D

Department of Veterinary Surgery & Radiology:

Name of student	Title of thesis	Year of submission	Name of guide	Name of degree
Dr. S.D. Mandal	Studies on anaesthetic protocol for Surg. Manangement of Pymetra in bitches"	2012	Dr. A. Maji	M.V.Sc
Dr. Tarani Naskar	"Studies on isolation, characterization of adipose tissue derived stem cells and its application in canine osteoarthritis patient"	2013	Dr. S. Guha	M.V.Sc
Dr. Manloi Konyak	Role of Rosuvastatin on segmental bone healing in Rabbits	2012	Dr. S. Guha	M.V.Sc
Rakesh Mandal	Evaluation of doped calcium phosphate based brushite cement as a bone mimicking biomaterial in animal model	2013	Dr. S. Nandi	M.V.Sc
Brihat Chettri	In vivo Characterization of doped hydroxyapatite alone and in combination with insulin like growth factor 1 for bone healing in animal model	2012	Dr. S. Nandi	M.V.Sc

**Department of Livestock Production Management:**

Name of student	Title of thesis	Year of submission	Name of guide	Name of degree
Anurodh Chhetri	Phenotypic Characterization of Siri type cattle in Kalimpong sub- division of Darjeeling District of West Bengal	2013	Prof. S. Pan	M.V.Sc
Dayanidhi Behera	Studies on the productive performances of commercial broiler chicken under coloured light and intermittent light regime	2013	Prof. R. Samanta	M.V.Sc
Asit Biswas	Studies on the Black Bengal Goat management in two agro-climatic sub-regions of West Bengal	2013	Dr. S. Bera	M.V.Sc

Department of Veterinary Pharmacology & Toxicology:

Name of student	Title of thesis	Year of submission	Name of guide	Name of degree
Amit Kumar	Toxicokinetic and short term study of lufenuron 111 Black Bengal goats	2012	Prof. T.K. Mandal	M.V.Sc
Surendran N.	Effect of Butachlor on haemogram, biochemical and hormonal status and its residue level 111 Black Bengal female goats following oral administration for 28 days	2012	Prof. T.K. Mandal	M.V.Sc
Aruna kumari Singh	Short term study of some xenobiotics on haemogram, biochemical, anti-oxidative and hormonal status with reference to residue level in Black Bengal	2012	Prof. T.K. Mandal	Ph.D
Prabhakar Maurya	Disposition kinetics of ceftizoxime in cisplatin induced grade-II chronic renal failure goats with special reference to its interaction with <i>Tamarindus indica</i> Linn leaf juice	2013	Dr. T.K. Sar	M.V.Sc
Jeevan R. Dash	Disposition kinetics and efficacy of intravenous ceftriaxone with adjunct therapy of some orally administered medicinal plant pats in induced chronic mastitis 111 goats	2013	Dr. T.K. Sar	Ph.D
Madhuchanda Khan	Disposition kinetics of some xenobiotics with special reference to haemogram, biochemical, and residue in layer and broiler poultry.	2013	Prof. T.K. Mandal	Ph.D



Department of Animal Genetics & Breeding:

Name of student	Title of thesis	Year of submission	Name of guide	Name of degree
Shashank Sekhar	Chromosome analysis of arseruc effected cattle in comparison to normal cattle	2012	Prof. A.K. Sahoo	M.V.Sc
Pankaj Chowdhury	Sister Chromatid Exchange Analysis of arsenic affected cattle	2012	Prof. A.K. Sahoo	M.V.Sc
Reshma Saikhorn	Cytogenetic studies of chromosomes in yak	2012	Prof. S.K. Misra	M.V.Sc
Dr. D. Raja	Molecular characterization of Exon1 of GOF9 Gene in Prolitic Garole Sheep	2013	Dr. S. Taraphder	M.V.Sc

Department of Veterinary Physiology:

Name of student	Title of thesis	Year of submission	Name of guide	Name of degree
Suraj Jyoti Gogoi	Studies on growth of RIR birds reared in backyard with special reference to some physio-biochemical profiles and micronutrients at different agroclimatic zones of West Bengal	2012	Dr. Prabal Ranjan Ghosh	M.V.Sc.
Sritanu Maity	Studies on some physio-biochemical profiles of laying RIR birds reared in backyard in relation to summer stress at different agroclimatic zones of West Bengal	2012	Dr. Pradip Kumar Das	M.V.Sc.
Bhaskar Samanta	Physical and morphological changes in spermatozoa of Black Bengal buck during cryopreservation	2012	Prof. S. Sanyal	Ph.D.

Department of Veterinary Gynaecology & Obstetrics:

Name of student	Title of thesis	Year of submission	Name of guide	Name of degree
Lokesh Das	Studies of some Haemato Biochemical Parameters of Black Bengal Goats (<i>Capra hircus bengalensis</i>) during different stages of pregnancy under semi intensive system.	2012-13	Dr. Pramode Ranjan Nandi	M.V.Sc
Kumud Ranjan	Studies on some Haemato Biochemical Profiles in relation to parity & Lactation in Garole Sheep	2013-14	Dr. Pramode Ranjan Nandi	M.V.Sc

**FACULTY OF FISHERY SCIENCES:****Department of Fishery Resource Management:**

Name of student	Title of thesis	Year of submission	Name of guide	Name of degree
Mr. N. Rrishikant Singh	Bioindices and Dynamics in Foraging of <i>Crrhinus mrigala</i> (Hamilton) and <i>Cyprinus carpio var. communis</i> (Linnaeus) in Polyculture system of Southern West Bengal	2012	Prof. S.K. Das	M.F.Sc.
Ms. Supriya Rani	Growth and haematological response of <i>Labeo rohita</i> (Hamilton) fingerlings exposed to low salinities	2012	Dr. Nagesh T.S.	M.F.Sc.
Mr. Sanjeevkumar	Studies On Sex Reversal And Growth Performance of A Fighting Fish (<i>Betta Splendens</i>) Treated With A Synthetic Hormone 17 α -Methyl Testosterone Through Immersion Method	2012	Dr. S. Behera	M.F.Sc.
Ms. Pritijyoti Majhi	Compensatory Growth response in fingerlings of <i>Cyprinus carpio var. communis</i> (Linnaeus) following different protocols of starvation and realimentation	2013	Prof. S.K. Das	M.F.Sc.
Ms. Chitra Pakhira	Effect of acute physical and biological stressors on the haematological and biochemical responses in rohu, <i>Labeo rohita</i> (Hamilton, 1822)	2013	Dr. Nagesh T.S.	M.F.Sc.

Department of Aquatic Environment Health:

Name of student	Title of thesis	Year of submission	Name of guide	Name of degree
Ajeet kumar	Assessment of the ecological status of Giddhi Lake and Panshokar Lake of Bihar using IBI.	2012	Prof. R.K. Trivedi	M.F. Sc
Pranita Rauto	Utilisation of treated Breweries effluent in fish culture	2012	Prof. B.K.Das	M.F. Sc
Arghya kamal Ray	Feasibility of Cage Culture of Exotic Carp <i>Barbonymus gonionotus</i> (Bleeker, 1850) in Composite Fish Farming Systems	2013	—	M.F. Sc
Sriparna Chakraborty	Effect of Salinity of Survival of Aquatic Macrophytes and on Stress Hormones of <i>Labeo rohita</i> (Hamilton, 1822)	2013	Dr. S.K.Rout	M.F. Sc



Inaugural session of a training programme on Communicative English for the students at Mohanpur campus



Valedictory session of a training programme on Communicative English for the students at Jorasanko campus of Rabindra Bharati University



Students' participation in 13th AGRUNIFEST, 2013



1st in on spot painting in 13th AGRUNIFEST, 2013



Farewell programme of Smt. Bandana Mitra on 30.06.2012 at newly furnished Registrar Section



Smt. Bandana Mitra receiving cheque from the members of WBUAFS Co-operative Credit Society



Dr. S Ayappan, Hon'ble Director General of ICAR visited the modern Office room with multiple work station



Farewell programme of Sri Mustaq Ahamed with other officials at the ground of administrative building ground



Administrative building of WBUAFS at Belgachia, Kolkata



Department of Aquaculture:

Name of student	Title of thesis	Year of submission	Name of guide	Name of degree
Alok Rajak	Study in pen farming in a small river; its impact on pen farmers, soil and water qualities and designing new orientation of pens.	2012-13	Dr. T. K. Ghosh	M. F. Sc
Srijit Chakravarty	Comparative studies of iso-nutritional mash and pellet feed on growth performance of Rohu (<i>Labeorohita</i>) and Common carp (<i>Cyprinus carpio</i>): environmental quality and impact of bioturbation	2012-2013	Dr. S. K. Das	M. F. Sc.
Amit Manda	Comparative efficacy of two iso-nutritious feeds on the growth response of Rohu (<i>Labeorohita</i>) and Mrigal (<i>Cirrhinus mrigala</i>): environmental quality and importance of different production pathways	2012-2013	Dr. S. K. Das	M. F. Sc.

Department of Fishery Extension:

Name of student	Title of thesis	Year of submission	Name of guide	Name of degree
Mr. Randhirkumar	A study of factors Affecting Production and Adoption of Makhana cum fish Culture Practices in the Darbhanga District of Bihar	2012	Prof. S.S. Dana	M.F.Sc.
Mr. Prakash Chandra	A study on present status of fishery cooperative haardoi district of uttarpradesh	2012	Prof. S.S. Dana	M.F.Sc.
Mr. Samratpaul	Impact assessment of self help group Members Engaged In Carp Culture In Nadia District West Bengal	2013	Prof. S.S. Dana	M.F.Sc.

Department of Aquatic Animal Health:

Name of student	Title of thesis	Year of submission	Name of guide	Name of degree
Debolina Majumder	Study on Parasites of Exotic Carps in South-24 Paragans of West Bengal	2012	Dr Gadadhar Dash	M.F.Sc.
Perisetti Bhargavi	Effect of Nuvan on <i>Labeo rohita</i> (Hamilton) under Laboratory condition	2012	Dr Gadadhar Dash	M.F.Sc.
Kurva Raghu Ramudu	Study of parasites on Indian Major Carps (IMC) in the selected districts of West Bengal	2013	Dr Gadadhar Dash	M.F.Sc.



Name of student	Title of thesis	Year of submission	Name of guide	Name of degree
Sandya China Rajesh	Study of parasites on <i>Labeo bata</i> (Hamilton) in the selected districts of West Bengal	2013	Dr Gadadhar Dash	M.F.Sc.,
Ms. Leesa Priyadarsani	Impact of traditional shrimp farming on the microbial population	2012	Dr. T. J. Abraham, Professor	M F Sc
Ms Farhana Hoque	Screening and characterization of potential antagonistic bacterium from freshwater fish skin mucus and its application in disease management	2013	Dr. T. J. Abraham, Professor	M F Sc

FACULTY OF DAIRY TECHNOLOGY:

Department of Dairy Technology:

Name of student	Title of thesis	Year of submission	Name of guide	Name of degree
Sumona Bandyopadhyay	Process Standardization for Rasopuli – the Traditional Milk Based Sweet Delicacy of Bengal	2012	Dr. S.C. Pal	M. Tech (DT)
Atanu Das	Development of Smoked Sausage from Buffalo Skim Milk	2012	Dr. M.K.Sanyal	M. Tech (DT)
Chandra Sekhar Singha	Rasogolla from Texturized Soy Chhana	2012	Dr. S.K. Gangopadhyay	M. Tech (DT)
Anushree Khatua	Studies on the Process Standardization for Restructured Paneer and Ready-to-Eat Spicy Paneer	2013	Dr. S.C.Pal	M. Tech (DT)
Soumen Bera	Development of Indigenous Sweet – Malancha	2013	Dr. S.K. Gangopadhyay	M. Tech (DT)
Ashwini Mondal	Storage Studies of Chhanabara	2013	Dr. D.C.Sen	M. Tech (DT)
Biswarup Dutta	Development and Quality Evaluation of Bone-Whey Soup	2013	Dr. M.K.Sanyal	M. Tech (DT)



STUDENTS' ACTIVITIES:

Sl. No.	Date	Place	Participants	Exposure	Special Remarks
1.	01/10/12	Rangabelia, Gosaba, South 24 Pgs.	15 Nos. of B.V.Sc. & A.H., M.V.Sc. & Ph.D. Students alongwith 5 Teachers	Health Camp	—
2.	29/03/13 — 31/03/13	Chandanpiri, Namkhana, South 24 Pgs.	10 Nos. of M.V.Sc., M.F.Sc., M.Sc. & M.Tech. Students alongwith 7 Teachers	Training cum Health cum Vaccination Camp	—
3.	25/10/13 — 27/10/13	Lodhasuli, Jhargram, Paschim Midnapore	22 Nos. of 5th Year B.V.Sc. & A.H. and M.V.Sc. Students alongwith 11 Teachers	Health Camp cum Vaccination Camp	—
4.	26/12/13 — 28/12/13	Rangabelia, Jati-rampur, Gosaba, South 24 Pgs.	32 Nos. of 2nd Year B.V.Sc. & A.H. Students alongwith 7 Teachers, 2 Staffs and 9 NGO Representatives	Health Camp cum Vaccination Camp	—
5.	04/04/14 — 05/04/14	Chandanpiri, Namkhana, South 24 Pgs.	32 Nos. of 3rd Year B.V.Sc. & A.H. Students alongwith 9 Teachers, 4 Staffs, 4 NGO Representatives	Health Camp cum Vaccination Camp	—
6.	24/02/13 — 28/02/13	JNKVV, Jabbalpur	14 Nos. of Students with 2 Teachers	13 th Agriunifest	<ul style="list-style-type: none"> • 1st Prize – Spot Painting – Nayana De • 4th Prize – Quiz – Prassana Pal & Sarikul Islam
7.	13/02/14 — 17/02/14	UAS, Bangaluru	23 Nos. of Students alongwith 3 Teachers and 1 Non-Teaching Staff	14 th Agriunifest	<ul style="list-style-type: none"> • 2nd Prize – Spot Painting – Subhasis Mondal • 4th Prize – Co'lage – Anish Biswas
8.	21/03/14 — 38/03/14	AAU, Jorhat	8 Nos. of students alongwith 1 Teacher	Inter Agricultural University Sports Meet	
9.	09/02/13 — 11/02/13	Central Annual Sports Meet		University sports complex, Belgachia	Inaugorated by Hon'ble Vice Chancellor in presence of DSW, Registrar, DREF and Dean & ISW of respective faculty

Sl. No.	Date	Place	Participants	Exposure	Special Remarks
10	05/12/13 – 10/12/13	Central Annual Sports & Cultural Meet		University sports complex, Belgachia and WBVC Auditorium, Belgachia	Inaugorated by Hon'ble Vice Chancellor in presence of DSW, Registrar, DREF and Dean & ISW of respective faculty
11	02/01/14 – 12/01/14	Vivek Chetana Utsav	Students of F/O – VAS	F/O - VAS	Inaugorated by Hon'ble Vice Chancellor in presence of DSW, Registrar, DREF and Dean & ISW of respective faculty

Students qualified in All India Competitive Exams for Higher Studies (AIEEA, JNU):

2012: 8 (Ranked 1st in JNU Biotechnology)

2013: 6

2014: 25 (Ranked 1st in Animal Science)

Award of various prestigious fellowship for Doctoral Studies:
A. INSPIRE FELLOWSHIP

Sl. No.	Name of the Students	Type of Fellowship	Department	Year
1	Swarnadyuti Nath	Inspire Fellowship	Fish Processing Technology	2012-13
2	Brihat Chetri	Inspire Fellowship	Vety. Surgery & Radiology	2013-2014
3	Gargi Mahapatra	Inspire Fellowship	L.P.T	2013-2014
4	Achintya Banik	Inspire Fellowship	Vety. Microbiology	2013-2014
5	Surojit Das	Inspire Fellowship	V.M.E.J	2013-2014
6	Ekantika Mondal	Inspire Fellowship	Vety. Biochemistry	2013-2014
7	Amit Kumar Pandey	Inspire Fellowship	Vety. Pharmacology	2013-2014
8	Lalita Sharma	Inspire Fellowship	V.E.P.M	2013-2014
9	Abhijit Barui	Inspire Fellowship	Vety. Biochemistry	2013-2014
10	Leesa Priyadarsani	Inspire Fellowship	Aquatic Animal Health	2013-2014

B. RAJIV GANDHI SC/ST FELLOWSHIP

1	Debjani Saha	Rajiv Gandhi SC/ST Fellowship	Vety. Biochemistry	2012
2	Lalchawimawia ralte	Rajiv Gandhi SC/ST Fellowship	Vety. Parasitology	2013
3	Binita Angom	Rajiv Gandhi SC/ST Fellowship	Vety. Pharmacology & Toxi	2013



Students qualified in ICAR NET Exam:

2012	:	8
2013	:	15
2014 (1st Phase)	:	10

EIGHTH CONVOCATION:

The 8th Convocation of West Bengal University of Animal & Fishery Sciences was held on 18th July, 2013 at Mohit Maitra Mancha, Kolkata. His Excellency the Governor of West Bengal and Chancellor of the University Hon'ble Sri M K Narayanan inaugurated the Convocation and presided over the ceremony. Prof. Abhijit Sen, Member, Planning Commission, Govt. of India acted as Chief Guest and delivered the convocation address on the occasion.

A total 8 students were awarded Ph.D degree, while 59 and 77 students received Master's and Bachelor's degree respectively, in all the three faculties of the University. The undergraduate students were awarded with 17 different gold medals and postgraduate students received 3 gold medals for their excellence in different disciplines of study under the three faculties of the University. Hon'ble Chancellor, in his speech, exhorted the degree recipients to contribute immensely towards realizing the dreams of shining India and prosperous West Bengal. The Chief Guests expressed his buoyant views in studies under this University and thereby immense employment opportunities during coming days. He has also wished the out-turned students a bright future. All the dignitaries expressed their satisfaction about the performances of the University all together.

SEVENTH CONVOCATION:

The seventh convocation of the University was held on 26th June, 2012 at Mohit Maitra Mancha, Belgachia, Kolkata. His Excellence the Governor of West Bengal and Chancellor of the University Hon'ble Sri M K Narayanan inaugurated the convocation and presided over the ceremony. On this occasion, Lt. General (Dr.) Narayanan Mohanty, the first Director General of Remount Veterinary Service and President, Veterinary Council of India acted as the Chief Guest and he delivered the convocation address.

The seventh convocation of the University conferred the Degree of Doctor of Science (Honoris Causa) on Dr. S. Ayyappan, Secretary, Department of Agricultural Research & Education, Ministry of Agriculture, Govt. of India and Director General, ICAR, New Delhi and also on Prof. Bijoy Kumar Chakraborty, Ex-Director, National Dairy Development Board (Eastern Region). Janab Nure Alam Chowdhury, Hon'ble Minister-in-charge, Deptt. of Animal Resource Development and Janab Abu Hena, Hon'ble Minister-in-charge, Deptt. of Fisheries, Aquaculture, Aquatic Resource & Fisheries Harbours, Food Processing Industries & Horticulture to the Govt. of West Bengal were present to grace the occasion.

A total of 14 students were awarded Ph.D degree, while 106 and 150 students received Master's and Bachelor's degree, respectively, in all the three faculties of the University 37 different gold medals were awarded to 20 students for their excellence in different disciplines of study under the three faculties of the University.

Hon'ble Chancellor, in his speech, exhorted the degree recipients to contribute immensely towards realizing the dreams of shining India and prosperous West Bengal. Chief Guest expressed his buoyant views in studies under this University and thereby immense employment opportunities in the near future. Hon'ble MIC, ARD Deptt. and Hon'ble MIC, Fisheries Development Deptt., Govt. of West Bengal greeted the out-turned students and wished them a bright future. Hon'ble Vice-Chancellor elaborated the importance of integrated farming in the State. All the dignitaries expressed their satisfaction about the performances of the University all together.



Faculty wise following degrees were awarded to the students for the year 2010 & 2011:

Degree in the Faculties	No. of Students at 7th Convocation	No. of Students at 8th Convocation
Faculty of Veterinary & Animal Sciences		
B.V.Sc. & A.H.	75	27
M.V.Sc.	63	42
Ph.D	14	8
Faculty of Fishery Sciences		
B.F.Sc.	31	29
M.F.Sc.	34	12
Ph.D	---	---
Faculty of Dairy Technology		
B.Tech. (D.T)	44	21
M.Tech. (D.T)/M.Sc.	9	5
Ph.D	---	---
Total	270	144

Award Winner (Gold Medal) of students on 7th & 8th Convocation:

Sl. No.	Name of the Students	No. of Medals	Name of the Course	Award for the year the year
1	Lakshman Santa	04	B.V.Sc. & A.H.	2010
2	Munmun De	04	B.V.Sc. & A.H.	2010
3	Miss. Nilofar Yeasmin	04	B.V.Sc. & A.H.	2010
4	Piyali Mondal	01	B.V.Sc. & A.H.	2010
5	Akhilesh Minshra	01	M.V.Sc.	2010
6	Debarati Das	01	B.Tech(DT)	2010
7	Sunil Lumar	01	MTech(DT)	2010
8	Shiwangi Gupta	02	B.F.Sc.	2010
9	Sonali Jana	06	B.V.Sc. & A.H.	2011
10	Bithi Roy	02	B.V.Sc. & A.H.	2011
11	Manas Kumar Das	02	B.V.Sc. & A.H.	2011
12	Sourav Mahanti	01	B.V.Sc. & A.H.	2011
13	Miss. Chandreyee Sen	01	B.V.Sc. & A.H.	2011
14	Ekantika Mondal	01	B.V.Sc. & A.H.	2011
15	Ayushman Madhukoilya	01	M.V.Sc.	2011
16	Pabitra Hriday Patra	01	M.V.Sc.	2011



Sl. No.	Name of the Students	No. of Medals	Name of the Course	Award for the year the year
17	Itika Kundu	01	B.Tech(DT)	2011
18	Anindita Debnath	01	M.Tech(DT)	2011
19	Srijit Chakravarty	01	B.F.Sc.	2011
20	Farhana Hoque	01	B.F.Sc.	2011
21	Sharadindu Shil	14	B.V.Sc. & A.H	2012
22	Ram Kumar P	01	M.V.Sc	2012
23	Amit Kumar Pande	01	M.V.Sc	2012
24	Anirban Moitra	01	B.Tech. (DT)	2012
25	Sumona Bandyopadhyay	01	M.Tech.(DT)	2012
26	Tara Maity	02	B.F.Sc.	2012

Training programme for students in collaboration with Rabindra Bharati University:

West Bengal University of Animal & Fishery Sciences has organized a Training Programme for UG & PG students including SC/ ST students to improve the communicative skill in English Language in collaboration with the School of Language & Culture, Rabindra Bharati University. In the 3 campuses of the University like Belgachia, Chakgaria & Mohanpur, a number of 200 students including SC/ST students participated in the training programme. Hon'ble Vice-Chancellor of West Bengal University of Animal & Fishery Sciences inaugurated the programme on 29.04.2013 at 2 p.m in the VCI Hall, Belgachia, Kolkata. The first award ceremony held on 29th January, 2014 at Thakurdalan, Jorasanko campus, Rabindra Bharati University where qualified 61 students were awarded for Certificate due to successful completion of the training course.

4

RESEARCH :

Research activities in the fields of veterinary, animal husbandry, dairy and fisheries are coordinated and administered by the Directorate of Research, Extension & Farms of West Bengal University of Animal & Fishery Sciences. The major research works are being undertaken in the different departments by the faculty teachers, scientists and research workers of this University through various research projects funded by different agencies. In addition institutionally supported research programmes are also carried out by the different PG and Ph.D students of the University.

Being established in 1995, the West Bengal University of Animal & Fishery Sciences has remained engaged for promotion of Education, Research and Extension activities in the fields of Veterinary & Animal Sciences, Dairy Sciences and Fishery Sciences. The Faculty members, Scientists and Planners of the WBUAFS have committed to accept the challenges to safe-guard the interest of the farming community of the State of West Bengal through –

- a. Production of quality human resources by education,
- b. Development of new technologies through basic and applied research
- c. Dissemination of newly developed technologies to the State farmers.

To achieve the desired goal in research, the University has proposed some project proposals to ICAR and other funding agencies for consideration with sanction of fund. The University has undertaken various need-based programme and established different regional research and extension centres on various agro-ecological zones of the State to solve the regional problems for enhancing livestock and fish production of the State.

Progress of Research:

During the period from 2012 to 2014, this University has completed 12 number of research projects with fund allocation of Rs. 1300.31 lakhs received from various funding agencies. At present, there exist 37 number of ongoing research projects with fund allocation of Rs. 2682.31 lakhs receiving funds from various agencies. Out of 37 research projects in this University, 30 number of the projects are in the Faculty of Veterinary & Animal Sciences, 5 numbers are in the Faculty of Fishery Sciences and 2 number is in the DREF. To conduct these research programmes, this University received financial support from various funding agencies like ICAR, DST, DBT, UGC, Ministry of Agriculture and Industry. A brief summery of the on-going research projects at this university is annexed below:



On going Research projects:

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	Niche Area of Excellence on Animal Disease Registry and Tissue Bank	ICAR	Prof. I. D. Ghosh, Vety. Parasitology	257.15	2012
2	Sustainable farming system to enhance and ensure livelihood security of poor in Purulia, Bankura and West Midnapur district	NAIP, Component III, ICAR	Prof. P. Biswas, Animal Nutrition	87.57	2008
3	AICRP on Goat improvement, Black Bengal (Field unit)	ICAR	Prof. P. K. Senapati, AGB	129.63	2000
4	All India Network Programme on Gastro-intestinal parasitism	ICAR	Prof. J. D. Ghosh, Vety. Parasitology	44.43	2000
5	All India Network Programme on Bluetongue disease	ICAR	Dr. S. N. Joardar, Vety. Microbiology	46.06	2001
6	Conservation of Threatened Breed (Ghoongroo Pig)	Ministry of Agril., Gal	Prof. S. Pan, LPM	63.5	2004
7	Conservation of Threatened Breed (Bonpala Sheep)	Ministry of Agril., Gal	Prof. S. Pan, LPM	57.65	2005
8	Poultry seed project	PDP, ICAR	Prof. S. Pan, LPM	168.75	2009
9	The effects of Stinging (Urtica dioica) on performance of broiler chickens	Creswell Nutrition, Australia	Prof. T. K. Ghosh, Animal Nutrition	13.15	2009
10	Effects of yeast products on broiler performance Ingredients, UK	AB Vista Feed	Prof. T. K. Ghosh, Animal Nutrition	16.46	2009
11	Outreach Programme on Monitoring of drug residues and environmental pollutant	outreach, ICAR	Prof. T. K. Mandal, Vety. Pharmacology and Toxicology	106.40	2009
12	Outreach Programme on Zoonotic Diseases (Dermatophytosis and Cryptococcosis in Animals and Their Public Health Importance).	Outreach Programm, ICAR	Dr. C. Debnath, Vety. Public Health	73.04	2009
13	Conservation of Threatened Breed (Haringhata Black Fowl)	Ministry of Agril., GOI	Prof. S. Pan, LPM	70.00	2009



Sl. No	Title of the Project	Funding Agency	Principal Investigator and Department	Fund Sanctioned (₹ in lakhs)	Year of initiation
14	Bioavailability of nanocurcumin in extra cameral portion of eye using rabbit model	Institute of Life Sci., DBT, GOI	Dr. (Mrs.) S. Hazra, Veterinary Surgery and Radiology	2.00	2009
15	Epidemiology of extended-spectrum Beta Lactamases (ESBLs) in Enterobacteriaceae group of bacteria isolated from swine in NER and swine & poultry in West Bengal	DBT, GOI	Dr. S. N. Joardar, Vety. Microbiology	24.63	2012
16	Identification of SNPs in leptin gene for selection of Mithun (Bosfrontalis) for higher growth traits and characterization of leptin protein	DBT, GOI	Dr. S. N. Joardar, Vety. Microbiology	16.73	2012
17	Bioavailability and efficacy of ceftizoxime in induced mastitic Buffalo	Industry - Alembic Pharma	Prof. T. K. Mondal, Vety. Pharmacology & Toxicology	5.66	2012
18	Bioavailability and efficacy of ceftizoxime in induced mastitic Goat	Industry - Alembic Pharma	Prof. T. K. Mondal, Vety. Pharmacology & Toxicology	1.99	2012
19	Phenotypic characterization of Haringhata Black chicken	NBAGR & ICAR	Prof. S. Pan, LPM	10.00	2012
20	Efficacy and toxicity study of alcoholic preparation in Wistar Rats India Ltd.	Industry - M/S. Granules	Prof. T. K. Mondal, Vety. Pharmacology & Toxicology	4.50	2012
21	Evaluation of two Ayurvedic herbal formulations for wound healing activity in animal model	Industry - Divine Skincare India Pvt. Ltd.	Prof. T. K. Mondal, Vety. Pharmacology & Toxicology	5.84	2012
22	To study the benefits of CLOSTAT in commercial broilers and to compare the benefits over commonly used antibiotic growth promoters AGP's	Industry - Kemin Industry South Asia Pvt. Ltd.	Prof. B. Roy, Animal Nutrition	2.04	2012
23	Manipulation of rumen fermentation for improving growth performance of growing animals	DBT, GOI	Prof. P. Biswas, Animal Nutrition	20.00	2012



Sl. No	Title of the Project	Funding Agency	Principal Investigator and Department	Fund Sanctioned (₹ in lakhs)	Year of initiation
24	TSP on Sustainable improvement in livelihoods of broilers through livestock based production system in Bundwan Block of Puruli district, West Bengal	ICAR (Tribal Sub-Plan)	Prof. A. Goswami, Deptt. of Veterinary & Animal Husbandry Extension Education	64.45	2013
25	Isolation, characterization of osteogenic and neurogenic potential of adipose tissue of dog and its application in canine	ICMR	Dr. S. K. Guha, Deptt. of Veterinary Surgery & Radiology	30.00	2013
26	Development of animal cartilage for surgical implantation in Microtia and Rhinoplasty of human patient	DBT, Govt. of India	Dr. S. K. Nandi, Deptt. of Veterinary Surgery & Radiology	39.70	2013
27	Utilization of Scientific Expertise of Retired Scientists (USERS) Book Writing project on 'Serotonin Odyssey'	DST, Govt. of India	Dr. P. K. Debnath, Deptt. of Veterinary Pharmacology & Toxicology	9.66	2013
28	Development of novel tissue engineered silk biomaterial based wound dressing patch for diabetic foot ulcers	DBT, Govt. of India	Dr. S. K. Nandi, Deptt. of Veterinary Surgery & Radiology	56.96	2014
29	Genetic studies of candidate genes polymorphism and its association to prolificacy in Black Bengal goats	Start-up Research Grant to UGC, GoI	Dr. U. Sarkar, Deptt. of Animal Genetics & Breeding	6.00	2014
30	Studies on effect of feeding Amunity to control incidence of mastitis in dairy animals under field condition	Pharmaceutical Company	Prof. C. Guha, Deptt. of VEP M	1.81	2013
			Total	1435.76	



FACULTY OF FISHERY SCIENCES

Sl. No	Title of the Project	Funding Agency	Principal Investigator and Department	Fund Sanctioned (₹ in lakhs)	Year of initiation
1	Niche Area of Excellence on Surveillance of diseases of aquacultured finfish and shellfish in West Bengal and development of disease management strategies	ICAR	Prof. T. J. Abraham, Aquatic Animal Health	488.89	2012
2	AICRP on Establishment of post-harvest technology in Fisheries	ICAR	Dr. Sreekanta Sarkar, Fish Processing and Tech.	215.00	2004
3	NICRA project on Development of Climate resilient aquaculture strategies for Sagar and Basanti Block of Indian Sundarbans	ICAR	Prof. R. K. Trivedi, Aquatic Environment Management	125.00	2011
4	Network Programme on Freshwater fish hatchery and transboundary diseases	ICAR collaborat IOn with CIBA, Chennai	Prof. T. J. Abraham, Aquatic Animal Health	391.120	2012
5	Development of surveillance programme for aquatic animal diseases in West Bengal	NFDB in collaboration with NBFGR, Lucknow	Dr. G. Das, Aquatic Animal Health	76.40	2013
			Total	1196.41	

DIRECTORATE OF RESEARCH, EXTENSION AND 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	1.08	2005
2	Climate change adaptation in rural area of India (CCARAI)	GIZ, Germany	Dr. B. K. Chand, Farm Manager	48.06	2012
			Total	50.14	



COMPLETED RESEARCH PROJECTS:

Sl. No	Title of the Project	Funding Agency	Name of Principal Investigator and Dept.	Fund Sanctioned (₹ in lakhs)
1	To Study the Benefit of "Butylcil" in Commercial Broiler Chicken and to Compare the Benefits over Commonly Used Antibiotic Growth Promoters (AGPs)	West Bengal Chemical Industries Limited Kolkata	Prof. B. Roy Animal Nutrition	1.32
2	Production of conjugated linoleic acid rich goat meat through dietary supplementation of vegetable oil and plant extract.	DBT	Dr. G.P. Mondal Animal Nutrition	30.00
3	Enteric methane production from Indian livestock and mitigation strategies (2 year)	ICAR	Dr. A.K. Patra Animal Nutrition	15.00
4	AICRP on Improvement of Feed Resources and Nutrient Utilization in Raising Animal Production	ICAR	Prof. P. Biswas Animal Nutrition	144.00
5	Development of marine biomaterials alone and in combination with conventional and unconventional growth factors in bone tissue engineering	DBT, Ministry of Sci. & Technology, GOI	Dr. S. K. Nandi Vety. Surgery & Radiology	9.00
6	Development of a model for sustainable poultry farming system in West Bengal	RKVY, NADP, Ministry of Agriculture	Dr. Pradip Kumar Das, Vety. Physiology	770.00
7	Arsenic in food chain: cause, effect & mitigation	NAIP, ICAR	Dr. S. Sarkar Vety Medicine, Ethics & Jurisprudence	53.00
8	Nanotechnology based drug delivery system for prevention of cataract: Proof of concept in a Rabbit Model	Institute of Life Sci., DBT, GOI	Dr. Sarbani Hazra Vety. Surgery & Radiology	93.40
9	Research & Development of EWMBN for sustainable Fisheries in Hooghly- Matlah Estuary	DST (SERC-Div) Central Dept. (DST sponsored, Govt. of India)	Dr. N.A. Talwar Fishery Engineering	16.09
10	Seed Production in Agricultural Crops and Fisheries	ICAR	Dr. T.K. Ghosh, Aquaculture.	23.00
11	Improper fish breeding practice & its impact on aquatic biodiversity & native gene-pool	DST, GoWB	Dr. S. Behera Fisheries Resours Management	2.00
12	R & D support for process upgradation of products for Industrial Application	ICAR	Prof. M. K. Sanyal, DT	143.50
			Total	1300.31

**NO. OF ON-GOING PROJECTS:**

Sl. No.	Faculty	No. of Projects	Fund Allocation (₹ in lakhs)
1	Vety. & Ani. Science	30	1435.76
2	Fishery Science	5	1196.41
3	Dairy Technology	0	-
4	Directorate of Res., Ext. & Farms	2	50.14
	Total	37	2682.31

FUNDING AGENCIES AND NATURE OF ON-GOING PROJECTS :

Sl. No.	Type of project	Funding Agency	No. of Project
1	AICRP	ICAR	2
2	NAIP	ICAR	1
3	Outreach Programme	ICAR	2
4	AINP	ICAR	3
5	Niche Area of Excellence	ICAR	2
6	ICMR	ICMR	1
7	Ministry of Agriculture	Govt. of India	3
8	DST, New Delhi	Govt. of India	1
9	NBAGR	ICAR	1
10	DBT, New Delhi	Govt. of India	6
11	Start-up Research Grant	UGC	1
12	PDP	ICAR	1
13	TSP	ICAR	1
14	NICRA	ICAR	1
15	Industry	Private	8
16	GIZ	Germany	1
17	NBFGR	NFDB	1
18	NISAGENET	ICAR	1
		Total	37



5

RESEARCH HIGHLIGHTS :

Department of Veterinary Public Health:

Name of the Project:

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*”. After examining different species of animals and human, this center has isolated 7 species of dermatophytes- *Microsporum canis*, *M. gypseum*, *M. nanum*, *Trichophyton verrucosum*, *T. mentagrophytes*, *T. rubrum*, *T. equinum*. Different epidemiological data have been collected and analysed for all clinically suspected animals and human. *Cryptococcus neoformans* and *Cryptococcus gatti* is isolated from different environmental samples specially pigeon droppings and excreta from other domestic and pet birds. The center is presently working on Antifungal Sensitivity Testing of the isolated organisms and Molecular Identification techniques for rapid identification of the diseases.

Department of Veterinary Medicine, Ethics & Jurisprudence:

Name of the Project:

Arsenic in food chain. Cause, effect and mitigation.

Generation of technologies – Some agent have been evolved to mitigate arsenic (As) from the animal substrates of As-exposed in field condition and on trial and also significant achievement have been made for mitigation.

Department of Veterinary Parasitology:

Title of the project :

All India Network Programme on Gastrointestinal Parasitism

The project is being run with the following mandates:

1. To elucidate the incidence and epizootiology of gastrointestinal parasitism in livestock of West Bengal
2. To estimate the economic losses caused due gastrointestinal parasitism in small livestock
3. To monitor the efficacy of the anthelmintics used in the state with a view to detecting the emergence of anthelmintic resistance
4. To standardize immunodiagnostic test(s) for early detection of gastrointestinal parasitism in livestock

Gastrointestinal parasites were of common occurrence in all the four livestock species surveyed. Prevalence was much higher (68.81 - 70.17%) in small ruminants (sheep - 66.29% and goat - 63.66%) than in large ruminants (cattle - 47.66% and buffalo 48.70%). The overall prevalence of gastrointestinal parasites irrespective of livestock species was 56.28%.

i. The overall prevalence of g.i. parasites in cattle, sheep and goat was higher in New Alluvial zone (cattle - 47.78%, Sheep - 66.76%, goat - 64.95%) compared to Red Laterite zone (cattle - 47.67%, sheep - 65.14%, goat - 60.80%). Prevalence of GIP was higher in buffalo of Red Laterite zone (48.92%) than New Alluvial zone (48.59%).

ii. The overall prevalence of gastrointestinal parasitism in all the four livestock species was highest in the monsoon (64.72%), followed by winter (53.47%) and the lowest was in summer (52.09%).

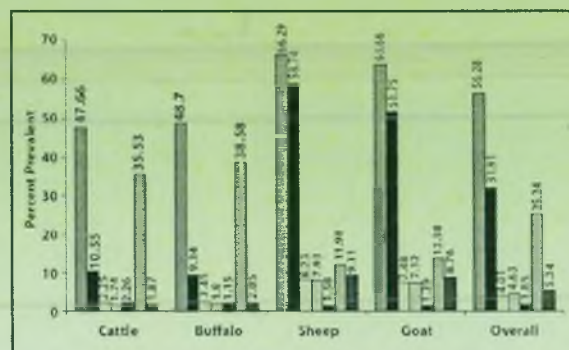
iii. Strongyle species constituted the major nematode, of which *Haemonchus* was the predominant species followed by *Oesophagostomum* in sheep and goats.

iv. The mean faecal egg count was highest in monsoon (cattle - 262.5, buffalo - 227.5, sheep - 827.5, goat - 762.5) and lowest in summer in cattle (147.5) and buffalo (157.5) and in sheep (540) and goat (532.5) lowest EPG were recorded in winter.

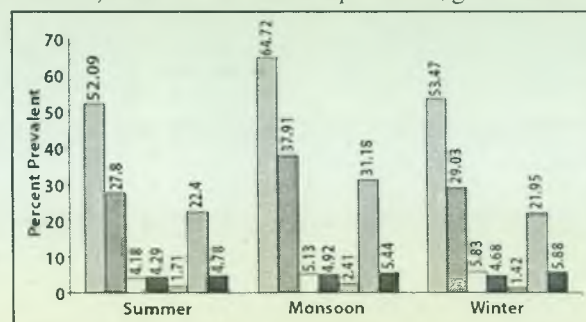
v. Mean worm load in small ruminants was highest during rainy season (sheep- 109.3, goat - 100.8) and lowest during the summer season in sheep (39.0) and goat (41.5).

vi. Commonly used anthelmintics (Fenbendazole and Ivermectin) continue to give the desired efficacy in the treatment of gastrointestinal nematodes in small ruminants. In an organized farm, resistance against albendazole was recorded for the first time in the state.

vii. *Haemonchus* resistant Garole Sheep had a stronger serum IgA, IFN-G and IL-4 response to artificial infection with *Haemonchus contortus* compared to susceptible Sahabadi sheep. Serum IgE concentration was comparatively higher in infected Sahabadi sheep compared Garole sheep.



Overall Prevalence of GIP in ruminant livestock of West Bengal



Overall Seasonal Prevalence of GIP in ruminant livestock of West Bengal

Title of the project :

Niche area of Excellence on Animal Disease Registry & Tissue bank

Generation of technologies:

- PCR based diagnosis of animal Trypanosomosis.
- Cryopreservation of few protozoan parasites like *Trypanosoma evansi* and *Toxoplasma gondii*.
- ELISA based technique for early detection of fasciolosis has been developed.
- ELISA based diagnostic technique for detection of gastrointestinal nematode infections has been standardized.
- Tactical anthelmintic use as a tool for improving the profitability of goat rearing has been devised.
- PCR based diagnosis of *Toxoplasma gondii*
- PCR based diagnosis of *Babesia gibsoni*, *Ehrlichia canis*, *Haemobartonella* spp. etc.



Department of Veterinary Epidemiology & Preventive Medicine:

Name of the Project:

Studies on effect of feeding Amunity to control incidence of mastitis in dairy animals under field condition

Generation of technologies:

Development of thermostable vaccine against Ranikhet disease (in progress)

Department of Animal Nutrition:

Name of the Project:

Enteric methane emissions from livestock and mitigation strategies condition

Area of research work of the project : Enteric methane emissions

Objective of the Project :

- In vivo assessment of methane production from commonly used feeds and fodders.
- Prediction model for estimating methane production in ruminants
- Methane mitigation strategies by developing alternate hydrogen sinks (acetogens) using nutritional and biotechnological approaches.

Title of the Project :

Production of conjugated linoleic acid rich goat meat through dietary supplementation of vegetable oil and plant extract

Area of research work of the project : Improvement of meat quality through dietary intervention.

Objective of the Project :

- In vitro screening of vegetable oils and plant extracts for their possible role in regulating rumen biohydrogenation.
- Investigate the effects of addition of graded levels of vegetable oil in the diet of goat on animal performance and fatty acids especially CLA content of muscle and adipose tissue, and carcass characteristics.
- Explore the effects of supplementation of different plant extracts in diet containing the vegetable oil on animal performance and fatty acids especially CLA content of muscle and adipose tissue, and carcass characteristics in goat.

Progress of achievements :

Establishment of laboratory. Purchase process of equipments completed. Recruitment of SRF and contractual labour completed. Selected different plants for preparation of plant extract. Standardization of In vitro method.

Achievements in general :

Preliminary work to start the project work completed



Title of the Project :

Effect of supplementation of emulsifiers in broiler chickens

Area of research work of the project :

In this project application of dietary emulsifiers is tasted on broiler chickens. Different types of conventional and nutritional emulsifiers are being tasted in this project.

Objective of the project :

To taste the efficiency of dietary supplementation of emulsifier on performance of broiler chickens and to evaluate the comparative efficacy of different conventional and nutritional emulsifiers.

Technology generation :

The findings of the project indicated that supplementation of emulsifier can improve the digestibility of high-energy broiler diets.

Recommendation to farmers :

Farmers and poultry producers may take up this technology to improve broiler performance by supplementing high-energy broiler diets with emulsifiers.

Title of the Project :

AICRP on Improvement of Feed Resources and Nutrient Utilization in Raising Animal Production

Area of research work of the project : Improvement of feeds & fodder for sustainable livestock production.

Objective of the project :

- a. To improve the feed resources and nutrient utilization by strengthening existing feeding practices.
- b. Strategic supplementation of deficient nutrients and ameliorating the anti nutritional factors.
- c. To increase the productivity per animal through improved feeding system in different agroclimatic regions.
- d. To increase the profitability of livestock through nutritional and physiological intervention.

Salient achievements in general :

Prepared mineral deficiency map of different agro-climatic regions of West Bengal.

According to deficiency special mineral supplement was developed and outstanding result was found in different categories of animal.

Comparative studies between inorganic & organic mineral revealed better bioavailability and performance with organic mineral supplementation.

Rice distillers grain used as alternative protein rich ingredients in different animal with better performance and economic profit.

Prepared mineral deficiency map of Sikkim and Tripura state. Technology generation : Developed Area specific mineral mixture.



Title of the Project :

Sustainable Farming System to Enhance and Ensure Livelihood Security of Poor in Purulia, Bankura and West Midnapore Districts of West Bengal

Area of research work of the project :

Income & employment generation through sustainable farming system in 3 districts of W.B.

Objective of the project :

To enhance farmer's income through productivity enhancement of livestock and fisheries.

Vaccination & Immunization camp for PPR, Goat Pox, FMD & regular deworming programme.

PPR – Highly contagious disease caused by virus family Paramyxoviridae, genus Morbilli virus. Morbidity rate may be as high as 70% and mortality rate may be 50-80% in susceptible population. Due to our regular immunization camp no report of PPR outbreak is noticed in this year.

Goat & Sheep Pox – Causative organism is Capri pox virus. Morbidity rate may be as high as 60% and mortality rate may be 50% in susceptible population. In these endemic villages systemic vaccination programme against goat & sheep pox have provided most effective control over the disease.

FMD – Causative organism is of the viral family Picornaviridae. Highly virulent, vaccination only provide temporary immunity. FMD has resulted in the slaughter of almost all animals in these villages but routine or regular vaccination camp causes decrease of occurrence of disease to a significant proportion.

Salient achievements in general :

238 of farmers/land less youth encouraged and trained for improved breed keeping.

475 nos of Black Bengal goat, 70 nos of T & D pig, 81 nos of sheep, and 3500 nos of Vonraja poultry were purchased and distributed among the farmers under the project.

12 nos nutritional schedules studied and standardized.

5 nos of vaccination and deworming campaigns organized.

12 nos of veterinary services identified.

238 nos of farmers/youth trained.

66 nos Goat Kids, 23 nos Sheep kids, 19 nos Piglets were born under the project.

50 nos. of farmers introduced with integrated fish farming to increase fish production.

Technology generation :

Characterization and conservation of good quality local breed/strain of livestock, poultry and fish is very much needed for improving low productive livestock population.

Improvement of livestock productivity through nutritional management utilizing local feed resources and adoption of modern health care management.

Developing a comprehensive technology-linkage system with reference to sustainable livestock & fish genetic resources, disease prevalence, feeding and other managerial practices in order to improve productivity of livestock and thereby upliftment of social and economic status of the farmers.



Department of Veterinary Surgery & Radiology:

Title of the Project :

Isolation, characterization of osteogenic and neurogenic potential from adipose tissue and its application in canine.

Progress of achievements:

Application of differentiated stem cells in canine treatment is already proved in the Clinics of Belgachia Campus is successful. Hence it will generate revenue in near future. This is the first time our country. I will apply this success in Equine practice in India also commercially in near future.

Generation of technologies:

Filed Indian patent for ocular drug formulation. In collaboration with University of Colorado Denver, USA. Application no 232/KOL/2013.

Title of the Project :

Development of Animal cartilage for surgical implantation in Microtia and Rhinoplasty of human patient.

Objective:

1. To process caprine choncal cartilage and to make it non-immunogenic
2. To assess immunogenicity and cytotoxicity of choncal cartilage before transplantation
3. To correlate between in vivo animal study, in vitro immunocompatibility/ immunological studies with human in vivo experiment.
4. Understanding the suitability of xeno choncal cartilage for ear reconstruction and rhinoplasty in human patient and its long term effects after application.

Work done so far: As per mandate, No. 1 and 2. Objectives have been carried out so far.

Generation of technologies:

Antibiotic (Ceftriaxone and Sulbactam) impregnated porous bioceramic beads have been prepared as a part of project work of Department of Science and Technology, New Delhi and animal trial and human application in osteomyelitis patients have been carried out in West Bengal University of Animal & Fishery Sciences and R. G. Kar Medical College and Hospital, Kolkata respectively

Title of the Project :

Development of novel tissue engineered silk biomaterial based wound dressing patch for diabetic foot ulcers

Objective:

1. Silk protein functionalization and in vitro characterization
2. Development of silk based 3D scaffold mimicking dermal patch
3. Isolation, culture & characterization of functional skin/stem cells.
4. 3D scaffold characterization and evaluation for optimized cell-matrix interactions, degradation and biomechanics.
5. In vitro bioavailability/functionality studies of 3D dermal patch
6. In vivo inflammatory, wound healing studies of 3D dermal patch in a diabetic mice and rabbit model.



The project is in budding stage and initial work on recruitment of project assistant and instrument purchase procedure is going on.

Title of the Project :

Development of marine biomaterials alone and in combination with conventional and unconventional growth factors in bone tissue engineering

Summary and Conclusions : The present study was conducted utilizing porous chitosan, marine coral and sponge alone and in combination with BMP-2, IGF-1 and snail extract in a critical sized bone defect model in rabbit tibia and compared. Before conducting animal trial, identification, isolation of the snail *Achatina fulica* including partial biochemical characterization was done. Based on the results of in vivo application of the said material, it is concluded that IGF-1 and snail extract impregnated porous chitosan, marine coral and sponge offer satisfactory and better results in terms of bone healing as compared to BMP-2 impregnated chitosan and chitosan alone. These three marine based biomaterials may be utilized as a carrier for delivery of several growth factors in orthopaedic surgery apart from its application as biocompatible bone graft substitute. The results on the animal application have tremendous promise and may be tried in human orthopaedic surgery in future.

Department of Livestock Production Management:

Title of the Project :

Poultry Seed Project

Objective: To augment the availability of improved rural chicken germplasm to all needy people across the country, by establishing the seed production units at different strategic locations of the country.

Achievement: During 2012 to 2014 a total of 1,93,487 Vanaraja and Grampriya chicks have been produced. The chicks have been channelized to backyard through government, non-government organization, krishi vigyan kendras and directly. Rupees 25,01,963.00 has been earned towards different sale proceeds.

Title of the Project :

Phenotypic characterization of Harringhata Black breed of chicken.

Objective:

- To determine geographical and demographical distribution of the breed.
- To record morphological, management and performance parameters of the breed.
- To evaluate egg quality parameters.
- To develop breed descriptor.

Achievement: Characterization of the breed has been completed. The breed is distributed over an area of 1300 sqkm spreading in Haringhata, Gaighata, Amdanga, Chakdah and Bongaon blocks. Estimated population is 63600 as has been determined by superimposition technique. Backyard poultry in the breeding tract of Harringhata Black breed is managed mainly by women (99.7%). Birds are kept in the free range system. Small kutchas are made to provide shelter during night. These birds scavenge in the nearby fields; eat whatever available in the form of grains, seeds, vegetation, insects, etc. This is supplemented with kitchen waste and paddy grains but commercial feed is not fed. Flock size is 7.9 per household. Body weight at 6 months is 981.8 ± 7.33 and 999.9 ± 6.68 g for hen and cock respectively. In backyard, the breed produced 45 and 98 eggs annually with and without brooding respectively. Clutch size and clutch interval are 5.98 and 2.21 respectively. Accession No. of the breed is INDIA_CHICKEN_2100_HARRINGHATABLACK_12008

**Title of the Project :****Conservation of Threatened Breeds of Livestock (Ghoongroo Pig)****Objective:**

1. Creation of stable Institutional structure towards conservation of livestock breed.
2. A watch list of threatened breed will be available to guide future actions.
3. At least some, if not the majority, of the breeds will be brought out of threatened status.
4. Improvements in availability of breeding inputs to breeders of the threatened breeds.
5. Availability of at least a nucleus population of threatened breed to cater to future need of regeneration of the threatened breed.
6. Development of a skill-pool of Government officials, academicians, scientists and non- government officials to further the conservation agenda on a sustainable basis.

Achievement: Ghoongroo pig is most prevalent in Doar's valley of eastern Sub-Himalayan region of West Bengal between 88° to 90° E longitude and 26.3° to 27.3° N latitude. The area belongs to the civil districts of Darjeeling, Jalpaiguri and Northern part of Cochbehar. The breed is also available in the eastern part of Nepal adjoining Darjeeling district. Most interestingly the breed has adapted very well to south Bengal climate. It has become very popular among the pig farmers of south Bengal because of its high growth rate at the farmers' house, very low health problem, excellent prolificacy, low mortality at preweaning stage, high quality pork and consequently high consumer demand. The animal is black in colour with compact body, thick coarse and long hair coat, long tail reaching below hock. The face is broad and flattened with upwardly curved snout, which is unsuitable for rooting. But the breed is a good grazer. The ears are large and heart shaped resembling those of elephant. Hindquarters are heavier and rumps are drooping. Scrotum loosely hangs from body. The breed is highly docile and amenable to any form of management. The breed has been registered with the Indian Council of Agricultural Research as the first indigenous Pig Breed of India. Accession No. INDIA_PIG_2100_GHOONGROO_09001.

Title of the Project :**Conservation of Threatened Breeds of Livestock (Bonpala Sheep)****Objective:** Like Conservation of Threatened Breeds of Livestock (Ghoongroo Pig)

Achievement: Bonpala, a sheep of Teesta - Torsa river valley is a highly threatened breed as has been identified by the National Bureau of Animal Genetic Resources, Karnal and Department of Animal Husbandry and Dairying, Ministry of Agriculture, Government of India. The breed is fast losing its popularity due to growing scarcity of pasture in the valley as a result of expansion of crop production and restriction on forest areas. The tribal and the landless resettlers from Bangladesh now mostly own the animals in the breeding tract. The breed is popularly known as Bonpala (Bengali). In some places they are also colloquially called Gharpala. These sheep derive their name from mode of rearing. In Bengali, Bon means forest, Ghar means home and

Pala means mode of rearing. With gradual disappearance of forest and restriction on grazing in existing forest areas in Teesta - Torsa river valley (Dooars and Tarai of Sub-Himalayan West Bengal), they are allowed either free or tethered grazing in close vicinity of farmers' residence.

It is a meat type sheep with small body size. The breed is prolific. Twinning is a regular phenomenon. Most interestingly the breed is now producing triplets under the scheme after genetic selection for one generation and with optimum plane of nutrition. They lamb thrice in two years. The fleece is hairy with 95 % medullated fibre and open. Fleece colour ranges from completely white to completely black with a number of intermediary tones. Belly and legs are devoid of wool. Ears are small and tubular. Tail is thin and short. The breed is under in-situ conservation at Ramsai farm. A total of 74 breeding stocks have been channeled to the keepers in the breeding tract.


Title of the Project :
Conservation of Threatened Breeds of Livestock (Haringhata Black Fowl)

Objectives: Like Conservation of Threatened Breeds of Livestock (Ghoongroo Pig)

Achievement: A representative population of the breed is under conservation in the breeding farm located at the Poultry Section of Haringhata Farm. Genetic purification through selection is in progress. The population has reached 5th generation. Present population size is 1000 with 500 breedable female and followers. At the same time 275 breeding stocks have been propagated in the breeding tract. One national seminar on "Backyard Poultry Farming" has been organized. Gram panchayat officials and 300 female backyard poultry keepers have been trained on 'Conservation and Backyard Poultry Keeping'.

Department of Animal Genetics & Breeding :
Title of the Project :
All India Coordinated Research Project on Goat Improvement, Black Bengal Field Unit

The ongoing AICRP on Goat Improvement - Black Bengal Field Unit came into existence in the year 2001 under the establishment of West Bengal University of Animal & Fishery Sciences, Kolkata with the main objective to conserve and genetic improvement of Black Bengal Goat in the farmer's flock. As per the technical programme the baseline information on production, reproduction, growth traits, population trend, managerial practices, feeding pattern, disease prevalence and socio-economics in goat production system were recorded and analyzed. The registration of animals at farmer's flock with proper identification was carried out in village units.

- ❖ To fulfill the objectives, four village units i.e. Ayeshpur, Ganguria and Doluipur (Nadia district), Rangabelia (South 24 Parganas district) were established under the project since last year. But Doluipur village unit was closed on March 2013 due to non-cooperation from goat keepers and unsatisfactory performance.
- ❖ But a new village Bamunia with 119 does in Bhagabangola Block of Murshidabad district is surveyed in February 2014 in collaboration with Digha KVK under this University. Thus the unit is now working in three village clusters i.e. Ayeshpur and Ganguria (Nadia district), Rangabelia (South 24 Parganas district), Bamunia (Murshidabad district).
- ❖ A total of five hundred twenty one registered doe (205, 175 and 141 does in Ayeshpur, Ganguria and Rangabelia village units respectively) are being recorded from which 956 kids are born from 1st April 2013 to 31st March 2014.
- ❖ 21 Bucks were purchased based on their 6 months body weight and prolificacy status of their dams. Out of these 12 bucks were distributed in the village units in addition to previous males for selective breeding. Rest of the bucks are maintaining at buck raising centre under the project.
- ❖ The average flock strength of the farmers has increased to 4.50 in 2013-2014 from the initial flock strength of 2.53 in 2002-2003.
- ❖ 59.75 % farmers have the flock size of 1 to 4 goats followed by 5 to 8 (33.47 %), 9 to 12 (3.81%) and then by above 12 (2.97 %). It is an indicator for popularity of goat rearing among the farmers with flock size 1 to 4.
- ❖ The average birth weight, 3 month, 6 month and 9 month body weight were recorded as 1.19 ± 0.01 kg, 4.77 ± 0.07 kg, 7.32 ± 0.10 kg and 9.79 ± 0.11 kg respectively in 2013-14.
- ❖ The average age at first service and 1st kidding have been observed 304.47 ± 23.77 days and 439.17 ± 24.67 days respectively in 2013-14.
- ❖ The average overall service period, gestation period and kidding interval was 80.49 ± 3.54 days, 146.14 ± 0.12 days and 234.47 ± 4.56 days in all village units during 2013-14.
- ❖ The kidding rate (litter size) has reached to 1.83 %. Twin born kidding is 54.51 % followed by singlet kidding (31.86 %), triplet kidding (11.90 %), Quadruplet kidding (1.54 %) and quintuplet kidding (0.19%)



- ❖ With the intervention of health care and prevention the kid mortality has been restricted to 8.36 % and the mortality in the total flock is 6.80 %.
- ❖ Animals sold by the farmers have also been increased substantially from 16.36 % in 2002-03 to 43.95 % in 2013-14.
- ❖ The average annual income from goat rearing per farmer is Rs. 4243.00 in 2013-14.
- ❖ The AICRP on Goat Improvement was successful enough to create awareness among the goat farmers about identification and record keeping, disadvantages of early breeding of young does; regular vaccination and deworming; importance of giving supplementary feeding to does, bucks and kids; optimum age and weight of kids at sale with expected market rate; first aid treatment etc through organization of several treatments cum vaccination camps along with other extension activities like meeting, interactive sessions, training etc.
- ❖ A Database Management Software has been made for handling and reporting of project data in this year.

Department of Veterinary Physiology:

Title of the Project :

Development of Model for Sustainable Backyard Poultry Farming in West Bengal

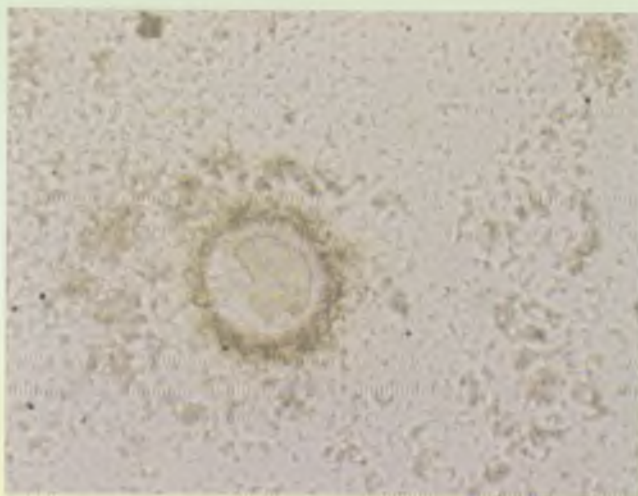
- Identification of age of bird to start the farm at backyard system of rearing
- Standardization of optimum run space for backyard poultry farming
- Standardization of feeding schedule for backyard poultry farming
- Standardization of Benefit-Cost (B-C) Ratio for backyard poultry farming
- Standardization of growth / production curve for backyard poultry farming
- Development of rural backyard poultry shed
- Development of semi-intensive system for backyard poultry farming with integrated farming vis-à-vis development of concept of organic farming
- Backyard poultry health management guidance through date calendar
- Introduction of weekly record keeping register for backyard poultry farming
- Forty two gene sequence related with poultry diseases having zoonotic importance and poultry diversity had also identified and deposited in the global data base.
- Documentation of endocrine profile of backyard poultry at different agro-climatic zones of W.B.
- Documentation of serum micronutrient profile of backyard poultry at different agro-climatic zones of W.B.
- Micronutrient profiling of soil, water and forage of backyard at different agro-climatic zones of W.B.
- Standardization of local feed ingredients used for backyard poultry by assessing the nutritive value at different agro-climatic zones of W.B.
- Assessment of physiological status in relation to growth and production of backyard poultry at different agro-climatic zones of W.B.
- Assessment of micronutrient level in different stages of ovarian follicle in black Bengal Goat.
- Physical and morphological changes in spermatozoa of Black Bengal buck during cryopreservation.
- Assessment of the effect of Radiofrequency on hsp70 Gene Expression and Immune-effector Cells of Birds.



On-hand training of the Field Veterinarians has been organized in the Department of Veterinary Physiology



FCG of Police Dog at Kokata Police Dog Squad by the Department of Veterinary Physiology



The department of Veterinary Physiology successfully isolated oocyte from bovine ovary for the students demonstration



The women farmer under RKVY, WBUAFS used the vegetable waste as feed for bird

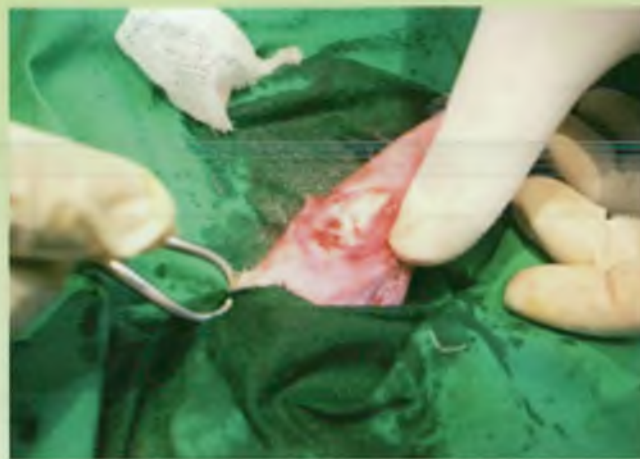


Dr. Samit K. Nandi carried out research works at Washington State University, USA





Porous Chitosan



Bone defect in tibia



Development and application of sponge biomaterials

Department of Veterinary Microbiology:

Name of the Project:

Epidemiology of Extended-Spectrum beta lactamases (ESBL) in Enterobacteriaceae group of bacteria isolated from swine in NER (Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim & Tripura) and swine & poultry in West Bengal

Salient Achievements:

- High cellular and especially humoral immune responses was observed in experimentally inoculated Haringhata Black (HB) and Rhode island Red (RIR) breed of poultry against ESBL producing *E. coli*. This might be the driving factors of resistance against the pathogen as opposed to broiler birds where clinical symptoms were imminent. Anti-*E. coli* antibody production was observed highest in HB than RIR and broiler birds as assessed by ELISA and western blot analysis.
- None of the *Salmonella* and *E. coli* isolates from the backyard birds kept in different agro-climatic zones of West Bengal harboured any major ESBL gene (*bla* CTX-M, *bla* TEM, *bla* SHV) probably due to lack of exposure to that kind of antibiotics. Whereas, the *E. coli* isolates from the healthy broilers were found to possess either one or more of the ESBL genes in terai and new alluvial zones. Thus the backyard birds and their products in West Bengal appeared as safe food in terms of antimicrobial resistance gene transfer.
- The pigs from organized and unorganized farms of West Bengal were detected to harbour ESBL (*bla* CTXM) gene containing *E. coli* isolates showing resistance against other antibiotics such as oxytetracycline and ampicillin- cloxacillin. This is the first time detection O: UT, CTX-M ESBL producing *E. coli* in swine population of West Bengal.
- The Shiga-toxin producing *E. coli* (STEC) isolates from buffaloes in West Bengal did not possess any major ESBL or quinolone resistance genes studied.

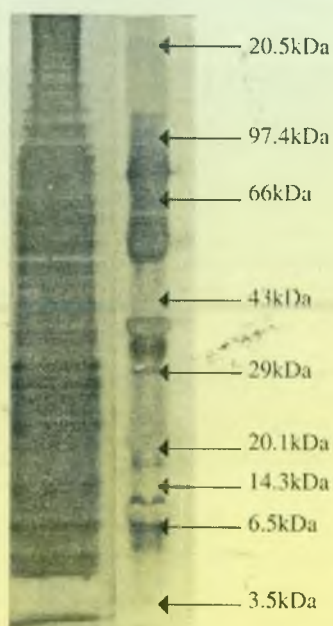


Fig. 1. SDS-PAGE analysis of crude protein antigen of ESBL producing *E. coli* (M-Standard protein marker; S-Crude somatic protein of *E. coli*)

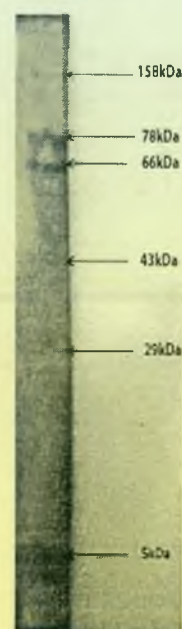


Fig. 2. Western blot analysis of crude protein antigen of ESBL producing *E. coli* using Serum from *E. coli* sensitized HB



Fig.3. Western blot analysis of crude protein antigen of ESBL producing *E. coli* using Serum from *E. coli* sensitized RIR



Fig. 4. PCR gel documentation photo showing amplification of *bla*_{TEM} in *E. coli* isolates from broiler birds. Lane M. 100 bp ladder, Lane 1, representative sample showing positive *bla*_{TEM} gene, Lane 2, positive control, Lane 3, negative control



Fig. 5. PCR gel documentation photo showing amplification of *bla*_{SHV} in *E. coli* isolates from broiler birds. Lane M, 100 bp ladder, Lane 1,2, representative sample showing positive *bla*_{SHV} gene, Lane 3, positive control, Lane 4, negative control

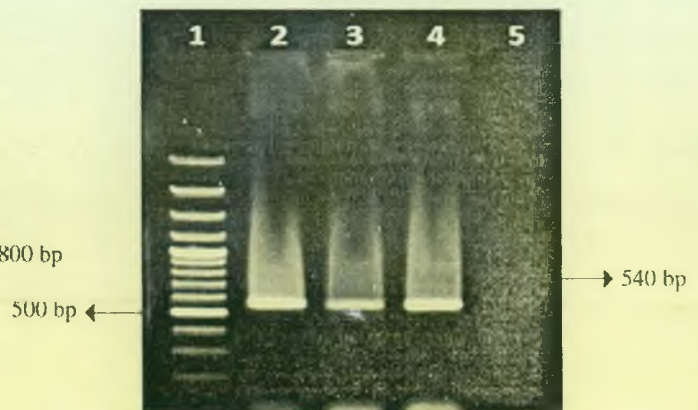


Fig. 6. PCR gel documentation photo showing amplification of *bla*_{CTX-M} in *E. coli* isolates from broiler birds. Lane 1, 100 bp ladder, Lane 2,3, representative sample showing positive *bla*_{CTX-M} gene, Lane 4, positive control, Lane 5, negative control

Title of the Project:

IDENTIFICATION OF SNPs IN LEPTIN GENE FOR SELECTION OF MITHUN (*Bos frontalis*) FOR HIGHER GROWTH TRAITS AND CHARACTERIZATION OF LEPTIN PROTEIN

Salient Achievements:

- Affinity purification of the crude adipocyte protein of mithun (*Bos frontalis*) was carried out using ConA–cellulose column. The affinity purified protein revealed a major band of molecular mass 16 kDa along with two minor bands of 4- and 54-kDa as assessed by SDS-PAGE. It showed that the affinity chromatographed fraction was a semi-purified preparation having a major protein of molecular mass 16 kDa.
- The actual molecular mass of leptin protein of mithun was carried out using mass spectroscopic analysis (MALDI-TOF) and the molecular weight obtained was 17214.26 Da.
- The secondary structure of Leptin protein was determined by using Circular Dichroism (C.D) study. It contains 4 α -helix and 2 β -pleated sheet structures.
- The sero-reactivity of affinity purified fraction was confirmed by plate and dipstick ELISA with the help of anti-mithun leptin antibodies. Moreover, this test (ELISA) revealed its potentiality in detecting leptin protein in clinical (suspected/unknown) samples and/or concentration thus explored the possibility of replacing other prevalent serodiagnostic assay viz. radioimmunoassay.

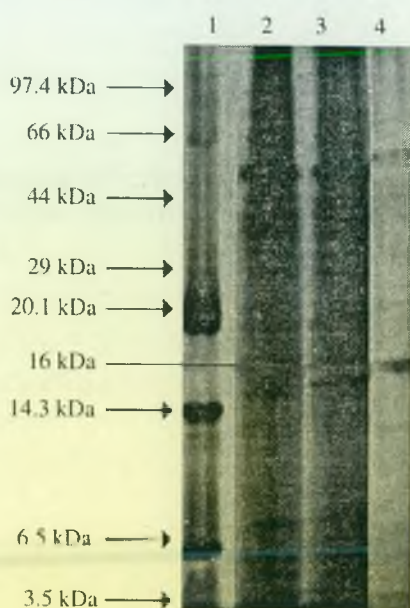


Fig.1. Polypeptide profile of crude and affinity fractionated proteins of adiposities obtained from Mithun as assessed by SDS-PAGE

1- Standard molecular weight marker, 2- Crude adiposite protein
3- Affinity purified unbound protein, 4- Affinity purified bound protein

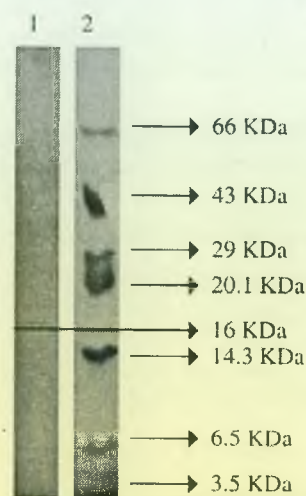


Fig.2. Western blot analysis of affinity purified bound protein obtained from adiposities of Mithun.

Lane 1-Affinity purified bound protein fraction

Lane 2-Standard Molecular weight marker range (3.5 kDa to 205 kDa)



Fig. 1. Photograph showing hematophagous midges *Culicoides oxystoma*



Fig. 2. RNA-PAGE profile of isolated bluetongue virus

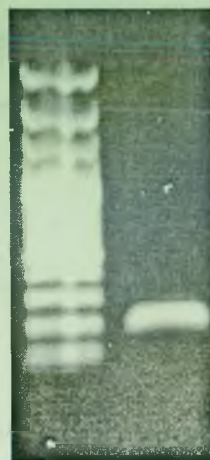


Fig. 3. Photograph showing NS1 specific band of BTV in agarose gel following RT-PCR

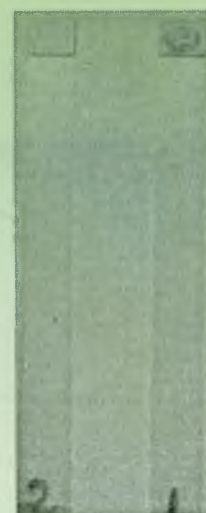


Fig.4. Sero-reactivity of affinity purified bound protein with known antiserum and control serum as assessed by Dipstick ELISA

Dip-stick 1: Anti-mithun leptin antibody (hyperimmune serum) Dip-stick 2: Negative control (normal serum)

Title of the Project :

All India Network Programme on Bluetongue Disease

Salient achievements:

1. Considerable seropositivity against bluetongue virus were detected in sheep, goat and cattle of different agro-climatic zones of eastern and north eastern states of India viz. West Bengal (overall 34.58%), Manipur (38.96%), Jharkhand (overall 44.79%) and Assam (46.99%).
2. Anti-BT antibodies were observed in farmed Mithun (*Bos frontalis*) of Nagaland, detected first time by AINP-BT scheme.
3. *Culicoides oxystoma* was observed to be predominant midges of West Bengal and Jharkhand during the study period.
4. Bluetongue virus (BTV) was isolated from suspected sheep of West Bengal (n=2) and Jharkhand (n=4).

Generation of technologies:

- a) Affinity column chromatography standardized for purification of Leptin protein of goat, mithun and fish.
- b) MALDI-TOF spectroscopy applied for purified leptin of goat, mithun and fish
- c) Dip-stick ELISA tool developed and standardized to detect anti-leptin antibody
- d) Dip-stick ELISA tool developed and standardized for detection of anti-Newcastle disease antibody in chicken
- e) Three bluetongue virus (BTV) isolates generated from cattle of Assam
- f) Detection of group A Rotavirus in faeces of diarrhoeic bovine, porcine and human population by RT-PCR standard



- g) Detection of genogroup I picobirnavirus in diarrhoeic faecal samples of calves by RT-PCR standardized
- h) T-cell blotting procedure standardized for detecting T-cell antigens of fowl pox virus
- i) Restriction enzyme analysis (REA) applied for fowl pox virus isolates of West Bengal
- j) Steps for isolation of intra-epithelial leucocytes of poultry in vitro standardized
- k) First molecular detection of ESBL producing Enterobacteriaceae in indigenous and exotic pigs of West Bengal
- l) First molecular detection of Shiga toxin producing E. coli (STEC), Enterotoxigenic E. coli (ETEC) in water buffaloes of West Bengal
- m) The hypothesis regarding absence of virulence and ESBL genes in the bacterial isolates from backyard poultry is generated and validated, subsequently which confirms the backyard poultry and its products as safe food for human consumption
- n) Biosecurity strategy for backyard poultry is generated and disbursed among the farmers

Faculty of Fishery Sciences:

Department of Fish processing Technology:

Title of the Project :

AICRP on Post Harvest Technology

Salient achievements:

1. Manufacture and preservation of ready-to cook Silver Pomfret in vacuum packaging .
2. Extension of shelf-life of extruded fish products using multilayer packaging material under nitrogen flushing.
3. Bacillus sp. isolated from Shidal and the nucleotide sequences of isolated two Bacillus species were directly submitted to the GenBank and after analysis of the sequences the following accession numbers were generated respectively:

GenBank accession number: "KF319057"

GenBank accession number: "KF319058"

Remarkable technologies expected to generate in the Department:

Sl. No.	Name of the technology	Name of the technology developer	Proposed date of expected technology development	Expected outcome (commercialization/ patent etc.) of the technology to be developed
1	Biopreservation of seafood	Department of FPT, FFSc	2014	Development of biopreservation strategies using Bacillus sp and/ or their metabolites. Impact of Bacillus sp on texture and biochemical properties of Hilsha to be assessed.
2	Preservation of fish using herbs/spices	Department of FPT, FFSc	2016	Development of suitable technology for preservation of fish using herbs/spices.

Remarkable technologies generated in the Department (After 2013)

Sl. No.	Name of the technology	Name of the technology developer	Date of technology development	Outcome (commercialization/ patent etc.) of the technology development
1	Development of fish snacks using surimi powder prepared from tilapia	Department of FPT, FFSc	2013	Ready for commercialization
2	Manufacture and preservation of ready-to cook Silver Pomfret in vacuum packaging	AICRP on PHT Department of FPT, FFSc	2013	Ready for commercialization

List of transferable technologies lying with the Department:

Sl. No.	Name of the technology
1	Development of fish snacks using surimi powder prepared from tilapia
2	Manufacture and preservation of ready-to cook Silver Pomfret in vacuum packaging.

Department of Aquatic Environment Management:

Title of the Project :

Development of Climate-resilient Aquaculture Strategies for Sagar & Basanti Blocks of Indian Sundarban.

During the period of 2012-14, following eight technical programme were carried out viz., i) Salinity tolerance study ii) Assessment of natural adaptive capacity to salinity iii) Effect of saline water flooding on freshwater species iv) Post-flooding growth performance of freshwater fishes v) Survival and growth performance of brackish water fish in freshwater vi) Aeration as adaptation strategy vii) Feed manipulation as adaptation strategy viii) Fish –livestock-crop integration as an adaptation strategy. The achievement of the works are-

- ❖ Median lethal Salinity (MLS96h) of *Macrobrachium rosenbergii* (Giant Freshwater Prawn) was found to be 24 ppt
- ❖ *Macrobrachium rosenbergii* and *Oreochromis mossambicus* (Tilapia) tend to adapt naturally till 15 ppt salinity but showed significant growth retardation at 20 and 18 ppt respectively.
- ❖ Amongst the tried species, *Macrobrachium rosenbergii* is the most tolerant species and can withstand saline water flooding followed by *Channa punctatus*, *Puntius javanicus*, *Cyprinus carpio*, *Puntius sarana*, *Labeo rohita*, *Cirrhinus mrigala*, *Ctenopharyngodon idella*, *Catla catla*, *Hypophthalmichthys molitrix*, and *Labeo bata*.
- ❖ Based on tolerance, adaptability and growth performances, Composite Climate Resilient Ranking (CCRR) was formulated which are- *Macrobrachium rosenbergii*, *Cyprinus carpio*, *Puntius javanicus*, *Labeo rohita*, *Catla catla*, *Puntius sarana*, *Cirrhinus mrigala*, *Ctenopharyngodon idella*, *Labeo bata*, *Hypophthalmichthys molitrix*.

Table: Composite Climate Resilient Ranking (CRR) of different freshwater species

Name of Freshwater species	Composite Salinity Tolerance rank based on survival just after salinity shock	Composite Growth Rank in terms of highest body weight gain (5ppt)	Composite Climate resilient Rank (based on tolerance, survival & growth)
M. rosenbergii	1	2	1
C. carpio	4	1	2
P. javanicus	3	3	3
L. rohita	6	4	4
C. catla	9	10	5
P. sarana	5	9	6
C. mrigala	7	11	7
C. idella	8	5	8
L. bata	11	6	9
H. molitrix	10	8	10
C. punctatus	2	7	11

- ❖ Brackishwater fish viz., *Liza parsia* and *Scatophagus argus*, *Liza tade*, *Etrophus suratensis*, *Terapon jarbua*, *Mystus gulio* & *Penaeus monodon* are adapted and grew well in freshwater and low salinity with no mortality. This is clearly indicated some of brackishwater species can be incorporated in freshwater culture systems in Sundarban.
- ❖ Adaptation strategy like aeration had positive effect on growth and survival upto 5 ppt salinity stress.
- ❖ Feed manipulation showed good potentialities to be used as an adaptation strategy in case of influx of saline water into freshwater ponds. Feed additives like Immunostimulant / Probiotic / Prebiotic alongwith high energy feed further increased the growth rate in salinity stress. High energy feed fortified with immunostimulant showed best growth followed by probiotics and prebiotics.

Climate adaptive integrated farming (CIAF), through incorporating Fish, Livestock, horticulture and crop varieties which can withstand salinity stress, has been tried as an adaptation strategy to enhance the resilience and has shown encouraging results with increased production and profitability. This is achieved through land shaping, reclamation, re-excavation of ponds, increase in height of the pond dykes including step-cutting or terracing on inward-slopes (three-tier system).

Department of Aquaculture:

Title of the Project :

Project wise salient achievements of the On- going research projects in the Department during the reporting period.

- b) Production of seed :
- January 2012 to December 2012 :
- i) IMC: 1071.31 kg and generated fund of Rs.93,941.00, ii) Common carp: 20 lakhs,
- January 2013 to December 2013 :
- i) IMC: 694.37kg and generated fund of Rs.1,26,888.00, ii) Common carp: 15 lakhs,
- January 2014 to March 2014 :
- i) IMC: 62.50kg and generated fund of Rs.16,150.00, ii) Common carp: 05 lakhs,

c) Control of ulcerative disease and dropsy which effected mrigal due to entry of contaminated water from adjacent areas through improved farming practices: Repeated netting in ponds was done to eradicate obnoxious gases. Lime was applied 250 kg/ ha followed by KMnO₄. Infected fishes were separated and saline water dip treatment was applied for a period of one month. Application of feed was restricted and gradually the condition improved.

Department of Fishery Engineering:

Title of the Project :

Research & Development of EWMBN for sustainable Fisheries in Hooghly-Matlah Estuary

Generation of technologies:

Designed ecofriendly winter migratory bag net (EMMBN) for sustainable estuarine fisheries

Department of Aquatic Animal Health:

Title of the Project :

Surveillance of Freshwater Fish and Shellfish Diseases in West Bengal

Objectives:

- 1) To collect information on incidence, prevalence, transmission, endemic presence and epidemic spread of fish diseases in four districts of fisheries importance (South 24 pgs, Howrah, Hooghly, Bankura) in West Bengal.
- 2) To provide means for rapid detection of new/emerging and exotic infectious diseases in these districts.
- 3) To collect information on distribution and occurrence of fish/shrimp diseases of concern in other districts of W.B. to develop data base under passive surveillance programme and to have a permanent record about disease and disseminate the information to others.
- 4) To assess the efficiency of disease control programmes with the use of commonly used chemicals and drugs in aqua sector for control and its environmental impact within a defined geographical area.

Title of the Project :

Niche Area of Excellence on Surveillance of diseases of aquacultured finfish and shellfish in West Bengal and development of disease management strategies

Disease surveillance**Exotic diseases**

- β haemolytic *Streptococcus* sp. (Streptococcosis) induced mortalities in Nile tilapia, *Oreochromis niloticus*
- Edwardsiellosis in *Clarias gariepinus*
- Lactobacillosis/ streptococcosis in *Hypophthalmichthys molitrix* and *Oreochromis niloticus*
- Association of *Aeromonas salmonicida* subsp *achromogenes* in the haemorrhagic blister of *Cyprinus carpio*.
- Association of *Desemzia incerta* in the brain of *Oreochromis niloticus* showing clinical signs similar to Streptococcosis/ Haemorrhagic septicaemia
- Aeromoniasis in back carp, *Mylopharyngodon piceus* and Pacu, *Piaractus brachypomus*
- Incidences of diseases in cultured exotic fish such as *Piaractus brachypomus*, *Clarias gariepinus*, *Cyprinus carpio*, *Ctenopharyngodon idella*, *Hypophthalmichthys molitrix*
- Two transboundary aquatic animal diseases and OIE listed diseases such as White spot syndrome virus (WSSV) in shellfish and Epizootic ulcerative syndrome (EUS) in finfish.



Sampling & treatment of diseased fishes by PI at Onda block , Bankura



Mrigal infected with ulcer



Internal hemorrhagic condition in gut



KMnO₄ applied during netting in infected pond



Individual fish are treated with KMnO₄ followed by saline water



Vanaraja Cock



Haringhata Black Cock



Characterization of indigenous sheep in dry arid region of West Bengal



Vanaraja at Gosaba Island



PI & CO-PI in the Launch Workshop of NSPAAD Project (Barrackpur) in the presence of Directors (from right end) NBFG, DFNB & CIFRI



PI & Co-PI (both from WUAFS & CIFRI), Departmental Officers, in the meeting related with project with Jt. Secretary of DFNB



Virology

- Prevalence of white spot syndrome virus (WSSV), monodon baculovirus and typical clinical signs of yellow head virus (YHV) were recorded in cultured *Penaeus monodon*.

Bacteriology

- Bacterial septicemia and ulcer were the most commonly encountered diseased conditions that have been observed in >25 finfish species.
- Simple taxonomic keys for the biochemical identification of motile aeromonads were developed.
- Association of Gram positive asporogenous non-acid fast rods have been observed in many haemorrhagic fishes.
- Among the ornamental fishes, motile aeromonas septicemia, ulcer, dropsy and gill disease were common.
- Twenty two (22) finfish bacterial diseases have been observed.
- A new disease named as Flectobacillosis caused by *Flectobacillus roseus* was reported in *Labeo rohita*.
- Molecular characterizations of 17 fish bacterial pathogens have been done, so far.

Parasitology

- Fifteen different parasites belonging to six different phyla were observed, of which myxozoan infection was the most prevalent. Parasitic diversity was highest in *Labeo rohita* and lowest in *Labeo bata*.
- Gills were found to be the most common site of parasitic infection.
- *Myxobolus* infection was observed throughout the year; however, the prevalence was more in winter season. The highest prevalence was found in *Catla catla* (95%).
- *Thelohanellus* infection was also observed throughout the year. Highest prevalence (85.71%) was found in *Labeo rohita*.
- Peri-urban Kolkata pond cultured carps had significantly high level of myxosporean infection than rural pond cultured carps.
- Morphologically identified *Myxobolus* spp. and *Thelohanellus* spp. were subjected to PCR amplification of 18S rRNA gene, which yielded a specific of approximately 1.8 kbp.
- A total of 12 *Myxobolus* spp and *Thelohanellus* spp. have so far been characterized by molecular tools.
- A total of 3 *Argulus* spp. have so far been characterization of *Myxobolus*, *Thelohanellus* and *Argulus* spp. from India.

Health Assessment Index (HAI):

- The annual average Health Assessment Index (HAI) value was the highest for *Labeo rohita* and least for *Labeo bata*. *Labeo bata* recorded the highest Coefficient of Variation (CV) value; while the *Cirrhinus mrigala* recorded the least CV value.
- *Labeo bata* was comparatively more resistant to stress condition than other Indian Major Carps (IMC).
- Among the IMC, *L. rohita* was more susceptible to stress.

Scanning electron microscopy

- The SEM study of the mature spores of *Myxobolus catmrigalae* revealed that spore surface was smooth and devoid of mucous. The sutural line, formed by the fused thick edges of each valve, was slightly curved. A slit like aperture was found above the lower middle part of the sutural line.
- The SEM study revealed that the plasmodia of *Thelohanellus caudatus* were in direct contact with the fin rays of the caudal fin. The anterior end of spore is smooth with suture folds and a sutural protrusion forming a rim around the spores. The polar filament discharge channel appears as a dark spot.

Haematology

- Thirteen different blood parameters of normal *Labeo rohita* were evaluated to identify the potential stress indicators and blood biomarkers.

- Serum glucose and serum cortisol increased with the severity of stress subjected to different stressors.
- The serum enzymes such as alanine aminotransferase, aspartate aminotransferase, and lactate dehydrogenase flaunted a drastic increase trend with different stressors.
- *Aeromonas hydrophila* infection caused more severe effect on the haematological and biochemical responses of *Labeo rohita* than *Edwardsiella tarda* infection.
- Although many of the parameters indicated altered physiological conditions of fish, all the parameters may not serve as good indicators of stress.
- Parameters such as serum glucose, total protein, alanine aminotransferase, aspartate aminotransferase and cortisol showed higher sensitivity to acute stressors evaluated.

Disease management strategies

- Antibigram of selected fish bacterial pathogens (50 strains) to 12 antibiotics revealed the fact that some of them are highly resistant to potent antibiotics and exhibited resistance to at least 10 antibiotics.
- Effect of crude extracts of *Polygonum glabrum* and *Polygonum hydropiper* on fish pathogens was investigated *in vitro*. Both exhibited antibacterial and antifungal activities against fish pathogens.
- Antagonistic activity of an antibacterial bacterium from fish mucus was investigated against fish pathogens *in-vitro*. It exhibited antibacterial activity against both fish and human pathogens at varying degrees.
- The antibacterial bacterium was identified as *Pseudomonas aeruginosa* P72 by FAME and 16S rDNA sequence analysis.
- From TLC results, second and fourth fraction - identified as "B" (containing 7-9 eluents) and "D" (containing 16 - 25 eluents) - were considered to be partially pure.
- The column chromatography mass spectrum profile of the partially purified fraction "B" of *Pseudomonas aeruginosa* extract showed the intensity peak of the m/z 144.08, 149.03, 122.91, 393.48 and 207.12 which may be 4-methyl quinazoline; 3, 5, 6 -trimethyl pyrazine-2- carbaldehyde with a loss of H⁺ ion; 2, 3, 5-trimethyl pyrazine; 1, 1-diphenyl-2 picryl- hydrazyl radical with a loss of H⁺ and phenazine-1-carboxylic acid with a loss of one water molecule.
- The another partially purified fraction designated as "D" fraction showed the intensity peak of the m/z 260.27, 315.35, 288.32 ([M+NH₄]⁺), 233.21 ([M+Na]⁺) and 244.25 peak in mass spectrum, which may be due to the presence of pyrrolnitrin (with loss of H⁺ ions) or 3-hydroxy tetra decanoic acid ([M+NH₄]⁺), 4-hydroxy-2-heptayl quinoline, pyoluteorin, pyocyanin and 3- hydroxy tetra decanoic acid.
- In biocontrol experiment, the *Labeo rohita* stocks which received a first 15 min dip in *Pseudomonas aeruginosa* P72 suspension containing 1x10⁷ cells/ml followed by another dip in *Aeromonas hydrophila* N₁₀P suspension containing 1x10⁵ cells/ml for 15 min and subsequently cohabited with healthy *Labeo rohita* showed 37% mortality; while 75% of the fish died when treated only with *Aeromonas hydrophila* N₁₀P suspension containing 1x10⁵ cells/ml and 30% mortalities were observed in fish challenged only with *Pseudomonas aeruginosa* P72 at a level of 1x10⁷ cells/ml in 30 days of post-challenge.
- Colonization of the antagonistic bacterium *Pseudomonas aeruginosa* P72 on fish such as *Labeo rohita* would help reducing the attachment of *Aeromonas hydrophila* and development of infection and disease outbreaks.

Directorate of Research, Extension & Farms

Title of the Project :

Pilot project on climate-resilient adaptation through physical protection and enhanced food production for Indian Sundarbans

West Bengal University for Agriculture and Fishery Sciences (WBUAFS) in collaboration with World Wide Fund for Nature (WWF) India is implementing this Pilot Project on Climate Change Adaptation project in Mousuni Island of Sundarbans. The project is being funded by GIZ, the Department of International Cooperation, Govt. of Germany. The project is being headed by Dr. Bimal Kinkar Chand, Farm Manager of the University, Mousuni island, the project site is encircled by Muriganga river in the west and north-west, Chenayer river in the east and



Buck Distribution Programme at Ayespur village of Nadia district on 20th Feb., 2014



Buck Distribution Programme at Ayespur village of Nadia district on 20th Feb., 2014



An ideal goat farmers at village under AICRP Black Bengal Field Unit Project



Discussions with goat farmers in villages under AICRP Black Bengal Field Unit



Mineral Supplement Formulated in the Department of Animal Nutrition



Tribal sub Plan under AICRP



Cultivation of Fodder Brassica for demonstration of the students



Dr. S Ayyappan, DG, ICAR visiting Demonstration site developed under NICRA Project



Production of Experimental Fish feed under NICRA Project to Combat Salinity stress



Dr. J k Jena, Director, NBFGR, Lucknow visiting the NICRA Wet Laboratory No: 3 at Mohanpur



Dr. B Venkateswarlu, Director, CRIDA, Hyderabad visiting NICRA Wet Laboratory



Mr. Noore Alam Chowdhury, Hon'ble MIC, ARDD and Hon'ble Vice Chancellor visited the seminar room of the Department of Veterinary Physiology



the Bay of Bengal in the south. Total land area of this island is 30 sq. km. which supports a population of 22,000. The island is experiencing many climate induced stresses like increase in extreme weather events, sea level rise, accelerated coastline erosion, submergence of land, salinisation etc. In the recent years this island has been facing acute problem of accelerated coastline erosion as well as periodic flooding of homestead and productive agricultural lands with saline water due to breach of embankments in many parts of this island, especially on the western side. Small farmers, when faced with the situation of being unable to cultivate their land or of having completely lost their land due to flooding, either turn to fishing or migrate as unskilled labourers, which results in a lower quality of life.

The project enables communities to adapt to climatic changes, e.g. by identifying areas that are especially prone to flooding and then introducing suitable salt tolerant paddy and fish varieties in these areas. It also helps the population to properly prepare for extreme climatic events and disasters. The project supports the implementation of activities that help build community resilience under conditions of climate stress. These activities include:

- Awareness campaigns on climate variability and the need to adapt to climate changes
- Introduction of salt tolerant paddy cultivation and locally suited euryhaline fish species culture
- Institutional arrangements with local governance bodies to seek their knowledge and experience and to guarantee a successful project implementation
- Disaster training of community members and forming of disaster response teams
- Establishment of a disaster preparedness centre that will act as nodal centre for disaster response teams
- Realisation of a study to assess options for the design of embankments which are suitable for the topography of the island

Following progresses have been made till date:

- Vulnerability assessment of the island had been conducted through topographic and embankment survey with the help of Jadavpur University. It has identified the vulnerable stretches of embankment and low-lying areas within the island which are vulnerable to coastal flooding.
- To aware the people about this climate variability, awareness campaigns were organised regularly. To initiate the campaign process, a knowledge-attitude-practice survey was conducted to assess the level of awareness and knowledge of the community on climate change and its impacts on their livelihoods especially agriculture and aquaculture.
- The volunteers from the island were trained on Community Based Disaster Management (CBDM) by trainers from Lutheran World Services India Trust (LWSIT). Under each tem, 5 task forces were formed with distinct different responsibilities such as: (i) early warning and rescue, (ii) shelter management, and water and sanitation, (iii) primary health care, (iv) damage and loss estimation, and (v) coordination.
- Farmers were motive to cultivate 6 salt tolerant paddy varieties namely Talmugur, Nonashal, Nonabokhra, Sadagetu, Lalgetu, and Hamilton. These varieties showed tolerance against saline water flooding and farmers were able to get satisfactory yield despite flooding, where as farmers growing conventional high yielding varieties suffered loss.
- Five salt tolerant indigenous Fish and prawn species were introduced in freshwater ponds of farmers alongwith the freshwater species. The species were: Liza tade -Tade Grey Mullet, Liza parsia - Goldspot Mullet, Scatophagus argus - Sotted Scat, Mystus gulio and Penaeus monodon-Tiger Shrimp. These species showed good survival and growth in freshwater. To enhance the income from these ponds, fish-livestock-crop integration was adopted. Horticultura crops like mango, coconut, sapodilla (local name - Sapeda) and Java apple (local name - Jamrul) were planted on the pond dykes.
- A Climate Change Information and Adaptation Centre has been planned which will act as a nodal centre for enhanced knowledge dissemination (on climate change and adaptation practices) and coordination centre (for disaster response).
- An Innovative Embankment Design has been developed with the help of Indian Institute of Technology Madras (IIT-M) for Physical Protection of Island. The pilot testing of this design at a vulnerable stretch is under the consideration of the funding agency.

6

ASSESSMENT, TRANSFER, COMMERCIALIZATION OF TECHNOLOGIES & PATENT :

Major Research Accomplishments :

The University has already evolved some remarkable technologies out of which are either commercialized, patented or in the pipeline of commercialization. These technologies are intended to enhance the income and livelihood security of the farming community through animal husbandry, dairy and fishery practices.

Presently there exists 37 numbers of on-going research projects with fund allocation of Rs. 2682.31 lakhs in the three faculties as well as Directorate of Research, Extension & Farms.

Major technologies developed and commercialization :

Sl. No.	Name of the technology	Name of the technology developer	Outcome (commercialization/ patent etc.) of the technology development
1	Region-specific mineral supplement production for livestock in West Bengal	Prof. P. Biswas, Deptt. of Animal Nutrition	Widely commercialized
2	Recycling of Rumen Offal's Effect of supplementation of emulsifiers in broiler chickens	Prof. T.K. Ghosh, Deptt. of Animal Nutrition	Development of dietary emulsifiers is tested in broiler chickens.
3	Recycling of Rumen Offal's Utilization of Slaughter house waste as animal feed.	Prof. T.K. Ghosh, Deptt. of Animal Nutrition	Under consideration
4	Recycling of Rumen Offal's Development of Pureline white ducks for shuttle cock production	Prof. G. Samanta, Deptt. of Animal Nutrition	Under consideration of DBT.
5	Antibody-ELISA based technique for early diagnosis of caprine oesophagostomosis	Prof. J. D. Ghosh, Deptt. of Vety. Parasitology	Not yet done
6	Copro-antigen detection ELISA for early diagnosis of caprine oesophagostomosis	Prof. J. D. Ghosh, Deptt. of Vety. Parasitology	Not yet done
7	Productivity enhancement in goat and sheep by tactical use of anthelmintic medication	Prof. J. D. Ghosh, Deptt. of Vety.	In pipeline
8	Bioclimatograph as a tool for forecasting economically significant level of gastrointestinal parasitism in ruminant livestock.	Prof. J. D. Ghosh, Deptt. of Vety. Parasitology	Under Process



Sl. No.	Name of the technology	Name of the technology developer	Outcome (commercialization/ patent etc.) of the technology development
9	Identification of anticoccidial biomolecules of a marine snail	Prof. J. D. Ghosh, Deptt. of Vety. Parasitology	Under Process
10	Development of ceramic-based implantable delivery system for sustained release of the drugs for the treatment of osteomyelitis in human patients	Dr. S. K. Nandi, Deptt. of Vety. Surgery & Radiology	Patent filed
11	Developed live attenuated lentogenic strain Ranikhet Disease vaccine from local isolate of Ranikhet Disease Vaccine	Prof. Chanchal Guha & Dr. Ujjwal Biswas, Deptt. of Vety. Epidemiology & Preventive Medicine	To be
12	Developed modified/purified F strain and R2B strain vaccines from commercial available vaccine	Prof. Chanchal Guha & Dr. Ujjwal Biswas, Deptt. of Vety. Epidemiology & Preventive Medicine	To be
13	Influence of corneal nerve regeneration on wound healing and its therapeutic modulation	Dr. (Mrs.) S. Hazra, Deptt. of Vety. Surgery & Radiology	Patent filed
14	Development and fabrication of square meshes technology for selective fishing	Dr. N. Talwar, Deptt. of Fishery Engineering	In the pipeline of commercialization

Impact statement:

In some research projects, generation of new technologies had been evolved and are now readily available to disseminate the same to the farming community. The University conducted different training programmes throughout the year for unemployed youth to impart the findings of the projects for employment generation as well as their socioeconomic upliftment. The University is also organizing different extension activities to develop the awareness among farmers and livestock owners to utilize the advanced livestock and fishery technologies for augmenting production in different agricultural sectors. The achievements of the research findings are being used for academic, research and extension activities of the University.

7

|| EXTENSION EDUCATION ACTIVITIES :

MAJOR EXTENSION ACTIVITIES :

The Directorate of Research, Extension and Farms guides and caters different extension education as well as extension services with the assistance of faculty members.

During the last two years, nearly 351 research papers were published in different national and international journals. Apart from this, University has 32 numbers of publications of different books, monographs, manuals, compendiums and activity highlights.

HUMAN RESOURCE DEVELOPMENT PROGRAMMES

The University primarily imparts training programmes for the practicing farmers, farm women, rural youth and school drop outs. The University also offers Master trainers' training programmes for the State level Extension Officers, Resource Persons of SHGs, Fisher folk of Sundarbans and also periodically organizes National level training programmes for Extension Officers of different States.

In the previous calendar year, the Directorate of Research, Extension & Farms has undertaken 15 skill-development training programmes on animal husbandry for the SHGs of N. 24 Parganas in association with the District Rural Development Cell, N. 24 Parganas Zilla Parishad. A total of 772 farmers have undergone such training programmes.

Besides, 200 butchers and meat workers of Kolkata and Murshidabad districts were undergone capacity building programmes with the financial assistance of National Meat and Poultry Processing Board, Govt. of India. A total of 220 farmers/ entrepreneurs were trained on cottage level food processing from animal origin during three training programmes sponsored by Indian Institute of Crop Processing Technologies, Ministry of Food Processing Technologies, Govt. of India. The 35 nos. of University faculty members as well State Govt. Officials were trained on use of ICT in animal resource management in the Workshop-cum-Training Programme conjointly organized with the National Institute of Agricultural Extension Management, Hyderabad.

CONSULTANCY CELL AND ADVISORY SERVICES

The Extension wing of the Directorate of Research, Extension and Farms helps in providing Consultancy and Farm Advisory services to the stakeholders in relation to livestock farming, dairy product processing including fish farming. In this regard, the active cooperation of the expertise is being received from the faculty members and officials/scientists of the University through field visits, farm or home visits, face-to-face discussions, over telephone, e-mails and postal communications. During the reporting period, a total number of 6,223 persons were rendered technical advises through this Directorate. A total of 18 Consultancies for establishing livestock farms, dairy, fishery and other animal origin food products processing and for similar projects / schemes were provided through the Consultancy Cell. Such consultancies were provided to the clientele through the individual or group consultants from the University. In addition, need based training and distribution of extension literature to the beneficiaries is being made during such Advisory and Consultancy services.



Documentary Films produced

Six numbers of Documentary Video film have been produced and being sold by the Directorate of Research, Extension & Farms, namely

- i. Gabadi (in Bengali on Cattle husbandry)
- ii. Garoler golpo (in Bengali on Garole sheep husbandry)
- iii. Chhagoler golpo (in Bengali on Bengal goat husbandry)
- iv. Hangsomin (in Bengali on Integrated farming of duck cum fishery)
- v. Choroibeti (in Bengali on Institution Village Linkage Programme)
- vi. Ghoongroo (in Bengali on Ghoongroo pig production through Centrally sponsored scheme on Threatened breed – Ghoongroo pig).

Publication of extension booklets and pamphlets on livestock & fish farming in local vernacular (Bengali)

Ten kinds of Extension Booklets and pamphlets on different species of livestock, fish and prawn farming have been published in local Bengali vernacular for the benefit of State farmers as well as extension functionaries, which are being sold from the Extension wing of the Directorate of Research, Extension & Farms, namely-

- i. Go-palon (Cattle farming)
- ii. Paschim Bonge Bhera Palon (Sheep farming in West Bengal)
- iii. Chhagol Palon (Goat farming)
- iv. Hans Palon (Duck fishery)
- v. Murgi Palon (Poultry farming)
- vi. Shukor Palon (Pig farming)
- vii. Motso Chas (Fish farming)
- viii. Chingri Chas (Prawn farming)
- ix. Khargosh Palon (Rabbit farming)
- x. Bachhur-er Jatno (Heifer rearing)

Such booklets, pamphlets, handouts, leaflets etc. with some other older edition of booklets on different topics of animal husbandry, fishery and allied enterprises are also distributed free of cost to the trainees during training programmes.

KRISHI VIGYAN KENDRAS :

The University has 3 (three) Krishi Vigyan Kendras (KVKs) in Jalpaiguri, North 24 Parganas and Murshidabad districts. All the KVKs have been functioning based on the mandates formulated by the Indian Council of Agricultural Research (ICAR) and the University through mutual understanding. Three centrally sponsored research projects have been implemented at Jalpaiguri KVK. In addition, six projects sponsored by Central and State Govt. Departments have been implemented at the Krishi Vigyan Kendras.

**KVK, JALPAIGURI:****TECHNICAL ACHIEVEMENTS**

Achievement of mandatory activities by KVK during 2012-13 and 2013-14

Year	On Farm trial		Front line demonstration		Training programme		Extension activities	
	Number of OFTs	Number of farmers	Number of FLDs	Number of farmers	Practicing Farmers	Extension Functionaries	Rural Youth	No. Of Extension activities
2012-2013	2	20	5	56	1601	46	44	34
2013-2014	6	52	13	184	2358	418	273	89

KISAN MOBILE ADVISORY SERVICE (2013-14)

No. of calls	No. of farmers covered	No. of messages	Types of messages (No.)					
			Crop	Livestock	Weather	Marketing	Awareness	Other
7812	1167	88	36	25	02	-	20	5

SEED PRODUCTION BY KVK DURING 2012-13 AND 2013-14

Year	Crop	Variety	Quantity(q)
2012-2013	Colocasia	Suji	4
	Colocasia	Panchamukhi	5.5
	Turmeric	Suranjana	2
	Total		11.5
2013-2014	Colocasia	Suji	3
	Colocasia	Panchamukhi	6.5
	Turmeric	Suranjana	2
	Elephant Foot Yam	Kavur	1.5
	Ginger	Garubathan	0.5
	Total		13.5



Inauguration of Administrative Building at N. 24 Parganas KVK, Ashokenagar



Inauguration of Technology cum Krishi Mela-2014 organized by Krishi Vigyan Kendra Murshidabad



Progressive farmers at Belgachia WBUAFS during three days exposure from three different KVK.



Practical session for farmers participating in skill development training programme



Practical session during exposure visit at Faculty of Fishery Science.



Celebration of Parthenium Awareness Camp at KVK campus



Distribution of fishes Live bearer to the farm women



Farmer's field visit for OFT programme (Pangas)



Foundation of Farmers Club by KVK supported by NABARD in Rambag village under Bhagwangola-1 Block



Immunization Camp in collaboration with KVK, ARD department MJ Block FMD Vaccination insitu



National Seminar at Faculty of Dairy Technology, Mohanpur, Nadia



Participants with the resource person in the HRD Programme



KVK, ASHOKNAGAR

Extension Activities (Including activities of FLD programmes)

Nature of Extension Activity	No. of activities	Farmers			Extension Officials			Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Field Day	32	669	287	956	-	-	-	669	287	956
Kisan Mela	1	768	512	1280	18	2	20	786	514	1300
Kisan Ghosthi	-									
Exhibition	3	943	507	1450	38	12	50	981	519	1500
Film Show	5	102	46	148	-	-	-	102	46	148
Method Demonstrations	18	305	80	385	-	-	-	305	80	385
Farmers Seminar	-									
Workshop	-									
Group meetings	16	111	79	190	-	-	-	111	79	190
Lectures delivered as resource persons	3	61	34	95	-	-	-	61	34	95
Advisory Services	501	413	88	501	-	-	-	413	88	501
Scientific visit to farmers field	217	398	58	456	-	-	-	398	56	456
Farmers visit to KVK	530	392	138	530	-	-	-	392	138	530
Diagnostic visits	243	133	110	243	-	-	-	133	110	243
Exposure visits	1	12	-	12	-	-	-	12	-	12
Ex-trainees Sammelan	1	89	61	150	-	-	-	89	61	150
Soil health Camp	-									-
Animal Health Camp	-									-
Agri mobile clinic	-									-
Soil test campaigns	-									-
Farm Science Club Conveners meet	3	97	23	120	-	-	-	97	23	120
Self Help Group Conveners meetings	3	71	41	112	-	-	-	71	41	112
Mahila Mandals Conveners meetings	-									-
Celebration of important days (Independence day)	1	14	6	20				14	6	20
Any Other (Specify)										
Total	1578	4578	2070	6648	56	14	70	4634	2082	6718

**TECHNICAL ACHIEVEMENTS:**

Target and achievement of mandatory activities by KVK during 2013-14

OFT				FLD			
Number of OFTs		Number of farmers		Number of FLDs		Number of farmers	
Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
4	4	29	29	6	6	62	237

Training				Extension activities			
Number of Courses		Number of Participants		Number of activities		Number of participants	
Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
35	45	1200	1420	850	1535	3500	5471

Seed production (q)		Planting material (Nos.)	
Target	Achievement	Target	Achievement
30	63.05	500	500

Target and achievement of mandatory activities by KVK during 2012-13

OFT				FLD			
Number of OFTs		Number of farmers		Number of FLDs		Number of farmers	
Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
4	4	29	29	4	3	42	82

Training				Extension activities			
Number of Courses		Number of Participants		Number of activities		Number of participants	
Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
40	41	1200	1260	850	1014	3500	3850

Seed production (q)		Planting material (Nos.)	
5		6	
Target	Achievement	Target	Achievement
10 qtl	24.4qtl	200	200

Indigenous technology practiced by the farmers in the KVK operational area which can be considered for technology development

S. No.	Crop / Enterprise	ITK Practiced	Purpose of ITK
1.	Potato	Stored in sand and bamboo trays	Increases the shelf life of potato
2.	Onion and Garlic	Hanging in bunch in cool place	Improves storage life
3.	Guava	Bending of branches	For crop regulation and year-round production
4.	Paddy/ wheat	Dried neem leaves/ dry chillies are placed in different layers of grain during storage	To check pest attack in paddy/ wheat during storage.
5.	Cucurbits/ brinjal	Dusting of ash over leaf	Minimize the attack of ants, aphids and powdery mildew
6.	Poultry	Feeding of turmeric powder with water	Reduce the severity of white diarrhea
7.	Cattle	Feeding of bamboo leaf	control diarrhea & dysentery
8.	Cattle	Paste of turmeric and neem leaves is applied externally on the affected area	To treat the foot lesions in Foot and Mouth Disease in cattle

Impact of KVK activities

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)
Introduction of newly HYV of black gram	40	60	5000	7500/ha
Introduction of newly HYV of green gram	35	50	5000	8000/ha

NB: Should be based on actual study, questionnaire/group discussion etc. with ex participants.

List of special programmes undertaken by the KVK, which have been financed by ATMA/ Central Govt/ State Govt./NHM/NFDB/Other Agencies

Name of the programme/scheme	Purpose of programme	Date/ Month of initiation	Funding agency	Amount (Rs.)
Strategic Research & Extension Plan	SREP	2012-13	ATMA	1,00,000
Protected cultivation of high value vegetables & quality Seedling production	Demonstration –cum– quality seedling production	2012-13	RKVY	12,83,000

**KVK, MURSHIDABAD****Training:**

Sl. No.	Year	Participants (No. of Farmers)		Extension activities	
		Target	Achieved	Target	Achieved
1	2012-13	1490	1916	5200	7911
2	2013-14	2650	1927	8000	6976
	Total	4140	3843	13,200	14,887

On Farm Testing (OFT):

Sl. No.	Year	Target	Achieved	No. of farmers
1	2012-13	6	6	45
2	2013-14	8	8	59
	Total	14	14	104

Front Line Demonstration (FLD):

Sl. No.	Year	Target	Achieved	No. of farmers
1	2012-13	9	9	204
2	2013-14	6	6	82
	Total	15	15	286

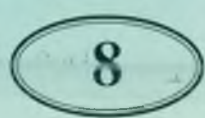
Award received by Farmers from the KVK district:

Sl. No.	Name of the Award	Name of the Farmer	Year	Conferring Authority	Amount	Purpose
1	Krishi Ratna	Mainuddin Sk	2013	Govt. of WB	10,000	Excellency in agricultural field
2	Krishi Ratna	Milton Sk	2013	Govt. of WB	10,000	Excellency in horticultural field
3	Mahindra Sammriddhi	Bikash Mandal	2013	Mahindra Sammriddhi	15,000	Excellency in Rice cultivation through SRI



Literature Developed/Published:

Item	Title	Authors name	Number	Circulation
Research paper	1. Low cost innovative technology for seed production of <i>Cirrhinus reba</i> (Hamilton, 1822) a backyard of Murshidabad district, West Bengal by using Ovaprim., International Journal of Advanced Fisheries and Aquatic Science-2013, vol. 1, Issue-1, pp.-49-55.	N.R.Chattopadhyay, Samiran Patra, Soma Giri, Abhishake Naskar, Uttam Roy.	1	
Books	Some impotent diseases of livestock and its prevention	Dr. Amitava Roy	1	
Extension Pamphlets / literature	1. Broiler Rearing 2. Duck Rearing (Khaki Campbell specially) 3. Chagal Rearing 4. Cultivation of Green Fodder 5. Important diseases of Small ruminant & its prevention 6. Management of pregnant cow	Dr. Amitava Roy	6	Circulated to 900 farmers
	7. Fresh water fish disease & its prevention 8. Preparation of fish feed 9. Culture of Tilapia fish (<i>T. mossambica</i>) 10. Fresh water prawn culture	Samiran Patra	4	Circulated to 900 farmers
	11. Guava cultivation 12. Preparation of Nursery bed in modern & Scientific way	Soma Giri	2	Circulated to 900 farmers
TOTAL			14	2700



PUBLICATION OF RESEARCH ARTICLES :

Scientific publications published by teachers/scientists and officers during 2012-13 & 2013-14 are furnished in the format as below:

Faculty of Veterinary & Animal Sciences:

Department of Veterinary Medicine, Ethics & Jurisprudence:

Scientific Research Papers
Halder, A., Joardar, S.N., Parui, P., Banerjee, D., Kumar, V., Samanta, I. and Lodh, C. (2013). Prevalence of Midges : Potent Vectors for Bluetongue Virus Infection in West Bengal, India. <i>Advances in Animal and Veterinary Sciences</i> . 1(4S):45-50.
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Har, T., Mondal, A., Lodh, C., Chakrabarti, A., Mukherjee, P., Batul, N.K., Panda, M.K., Goswami, J., and Mondal, S. (2012). Effect of Bael on Parasitic Load and Hematobiochemical profile of Hookworm infested Dogs with Enteritis. <i>Animal Science Reporter</i> , Vol.6(4):156-160.
Pradhan, N.R., Chatterjee, S., and Lodh, C.(2012) Demodicosis in Dogs and its Therapeutic Management. <i>Indian J.Canine Practice</i> , Vol.4(1):17-20.
Pradhan, N.R., and Roy, S.(2012) Chronic renal failure in dogs and its management. <i>Indian J.Canine Practice</i> , Vol.4(2):88-92.
Pradhan, N.R., and Jana, S.(2013) Hepatic insufficiency in dogs and its herbal treatment.. <i>Indian J.Canine Practice</i> , Vol.5(1):1-4.
Lodh, C., Dana, S., and Pradhan, N.R.,(2012) Diagnosis and Therapeutic Management of Malassezia Dermatitis in Dog. <i>Indian J.Canine Practice</i> , Vol.4(1):22-24.
Lodh, C., and Das, S.(2013) Prevalence of Canine Bacterial Dermatitis in West Bengal. <i>Indian J.Canine Practice</i> , Vol.5(1):109-113.
Das, M., Konar, S., and Pradhan, N.R.(2013). Therapeutic management of Diabetes mellitus with Dermatological affection in a bitch. <i>Intas Polivet</i> . Vol.14(11) :436-437.
Das, M., Konar, S., and Pradhan, N.R.(2013). Hypothyroidism associated with Dermatologic affections and its therapeutic management. <i>Intas Polivet</i> . Vol.14(11) :445-446.
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Bandhopadhyay, S., Patra, P.H., Mahanti, A., Mondal, D.K., Dandapat, P, Bandhopadhyay, S., Samanta, I., Lodh, C., Bera, A.K., Bhattacharyya, D., Sarkar, M., and Barua, K.K.(2013). Potential antibacterial activity of berberine against multi drug resistant enterovirulent Escherichia coli isolated from yaks (Poephagus grunniens) with haemorrhagic diarrhoea. *Asian Pacific Journal of Tropical Medicine*. Vol.6(4):315-319.

Mondal, D., Bhattacharyya, D., Bera, A., Ghosh, M., Sarkar, M., Lodh, C., Bandyopadhyay, S., Baruah, K.(2012). Prevalence, molecular fingerprinting and drug resistance profile of enterovirulent Escherichia coli isolates from free-ranging yaks of Tawang district, Arunachal Pradesh, India. *Springer Science+Business Media/0049-4747, Academic Publication*.

Ghatak, S., Singha, A., Sen, A., Guha, C., Ahuja, A., Bhattacharjee, U., Das, S., Pradhan, N. R., Puro, K., Jana, C., Dey, T. K., Prashantkumar, K. L., Das, A., Shakuntala, I., Biswas, U., and Jana, P. S.(2013) Detection of New Delhi Metallo-beta-Lactamase and Extended-Spectrum beta-Lactamase Genes in Escherichia coli Isolated from Mastitic Milk Samples. *Transboundary and Emerging Diseases*. Vol.60:385-389.

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- Biswas, S., Sikdar, D. P. and Goswami, A. (2012). Study on comparative knowledge level about improved Dairy farming practices of SHG & Non – SHG members in West Bengal. *Indian Res. J. Ext. Edu.* 12(1) – January : 104 – 109.
- Biswas, S., Sikdar, D. P. and Goswami, A. (2012). Study on Various Socio – personal Characteristics of Self Help Group (SHG) and Non – SHG members practicing Dairy farming in W. B., India. *J. Dairying, Foods and H. S.* 31 (4) : 272 – 278.
- Biswas, S., Sikdar, D. P. and Goswami, A. (2012). Adoption behavior of self help groups members practicing Dairy farming in West Bengal. *J. Dairying, Foods & H. S.* 31 (4) : 284 – 289.



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Chatterjee, P.N., Biswas, P., Pakhira, M., Pal, K. and Pal, A. 2013. Comparative Efficacy of Supplementation of Organic Manganese on Production Performance of Broiler Chicken. Abst. No. DPNI-13. In National Symposium on "Physiological and Nutri-genomic Interventions to Augment Food Security and Animal Welfare", held at DUVASU, Mathura, 19-21st Nov., 2013.



Chatterjee, P.N., Biswas, P., Pakhira, M. and Pal, A. 2013. Bioavailability study of chelated manganese in Broiler Chicken. Abst. No.102/P. In National Symposium on "Physiological and Nutri-genomic Interventions to Augment Food Security and Animal Welfare", held at CARI, Izatnagar, 22-23rd Nov., 2013.

Pal, A., Chatterjee, P.N. and Mandal, A.B. 2013. Morphological Characterization of indigenous breed of chicken under backyard of West Bengal with a comparison to RIR and their crosses. Abst. No. PGB-019/0. In National Symposium on "Physiological and Nutri-genomic Interventions to Augment Food Security and Animal Welfare", held at CARI, Izatnagar, 22-23rd Nov., 2013.

Department of Fishery Resource Management:

Paltasingh, S. and Das, S.K., 2013. Organic Farming Approach for Sustainable Agriculture and Ecological Development. In: Organic Farming and Vermiculture (L.R.Patro Ed.), Mangalam Publishers and Distributors, Delhi. pp.142-151.

Das, S.K., 2013. Integrated Aqua Farming for Rainbow Revolution and Farm Tourism for shaping Future of Rural India. Presented in 100th Indian Science Congress (3-7th January, 2013), Kolkata.

Chitra Pakhira, T. S. Nagesh, T.J. Abraham, G. Dash and S. Behera, 2013. "Stress response in rohu, *Labeo rohita* (Hamilton, 1822) transported at different densities" 24TH All India Congress of Zoology & National Seminar on "Biodiversity and its Management for Food, Livelihood & Environmental Security" & National Helminthological Congress. Kalyani University, Kalyani, West Bengal, 23-25 November, 2013.

Department of Aquaculture:

Mandal, A. and Das, S. K. 2014. Frontiers of Biotechnology in aquaculture. Proceedings of UGC sponsored National seminar on Prospects of Biotechnology in Rural Bengal, (ISBN 978-81-928627-2-9); pp 50-55, 17-18 January, 2014, Uluberia college, Uluberia,

Department of Dairy Chemistry:

A.K.Bandyopadhyay, P.R.Ray and P.K.Ghatak (2012). Dairy Education - A critical approach. Indian Dairyman. October, p68

P.R.Ray, P.K.Ghatak and A.K.Bandyopadhyay (2013). Chemical Factors of processing fermented milk. Processed Food Industry. January, p19

P.R.Ray, C.Chakraborty and P.K. Ghatak (2013). Pulse Electric Field (PEF) processing application in Dairy Industry. Beverage and Food World. 40(3):42

C.Chakraborty, P.R.Ray and P.K.Ghatak (2013). Studies on the Quality and shelf life of microwave processed diabetic payas. Dairy Food International. 1:8

P.R.Ray, K. Chatterjee, C.Chakraborty and P.K.Ghatak (2013). Lipolysis of milk: Review. Int. J. Agric.Sc & Vet. Med. 1:60-74.

Pinaki Ranjan Ray and Subrata Kumar Bag (2013). Safety and Quality Management in Dairy Industry. Indian Dairyman. August 2013. P84-90.

P.R.Ray and P.K.Ghatak (2013). Phytochemical Characterization and Antimicrobial Property of Banana (*Musa Paridasiaca*) Pseudostem Juice. Int. J. Agric.Sc & Vet. Med. 4:87-89

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PUBLICATIONS OF ACADEMIC, SCIENTIFIC, EXTENSION LITERATURE, MANUALS, MONOGRAPHS, REPORTS, COMPENDIUM, PACKAGE OF PRACTICES, BOOKS, BOOKLETS :

Details of publications of academic, scientific, extension literature, manuals, monographs, reports, compendium, package of practices, books etc.

Faculty of Veterinary & Animal Sciences:

Department of Veterinary Medicine, Ethics & Jurisprudence:

Name of book/ booklet/ handout/ report/manual/ monograph/ compendium/ package of practices, leaflet etc.	Name of the specific item published	Author / Co-Author (S)	Date of publication with issue page No. etc.
Book: VETERINARY EPIDEMIOLOGY		Amalendu Chakrabarti, Chanchal Debnath	Kalyani Publishers, 2013

Department of Veterinary Pathology:

Name of book/ booklet/ handout/ report/manual/ monograph/ compendium/ package of practices, leaflet etc.	Name of the specific item published	Author / Co-Author	Date of publication with issue page
Manual	VPP-211 VPP-221 VPP-311 VPP-321 VPP-322	Dr. S. K. Mukhopadhyay Dr. S. Pradhan Dr. N. C. Patra Dr. R. N. Hansda	2013

Department of Veterinary Biochemistry:

Name of book/ booklet/ handout/ report/manual/ monograph/ compendium/ package of practices, leaflet etc.	Name of the specific item published	Author / Co-Author (S)	Date of publication with issue page No. etc.
Practical Manual	Veterinary General Biochemistry	Dr. S. Batabyal Dr. S. Chattopadhyay	July 2012
Practical Manual	Physiological Chemistry, Clinical Biochemistry	Dr. S. Batabyal Dr. S. Chattopadhyay	January 2013
Practical Manual	Immunobiochemical Techniques	Dr. S. Batabyal	June 2013



Department of Veterinary Surgery & Radiology:

Name of book/ booklet/ handout/report/manual/ monograph/compendium/ package of practices, leaflet etc.	Name of the specific item published	Author / Co-Author (S)	Date of publication with issue page No. etc.
International Books	Role of Rosuvastatin in segmental healing	Manloi Konyak and Shyamal Kanti Guha	Feb 9, 2014 Published by LAP LAMBERT Academic Publishing Germany. ISBN-10: 384734286X ISBN-13: 978-384734286
International Books	Application of Acrylic and Circular ESF in fracture management in goat	Darun Biswas and Shyamal Kanti Guha	August 1, 2013 Published by LAP LAMBERT Academic Publishing. Germany. ISBN-10: 3659433675. ISBN-13: 978-3659433672.
International Books	Simvastatin and segmental bone healing: An Orthopedic Approach	Arumoy Sanyal and Shyamal Kanti Guha	July 24, 2012, Published by LAP LAMBERT Academic Publishing Germany. ISBN-10: 3659195391. ISBN-13: 978-3659195396
Book	"VET SPECTRUM	Amalendu Chakrabarti and Samit Kumar Nandi	2012, Kalyani Publishers, Ludhiana, India
Book chapter	"In vivo characterization of Biomaterials" in Book Characterization of Biomaterials, Elsevier, UK	Samit Kumar Nandi and Subhasish Biswas.	2013
Book chapter	"Application of marine biomaterials in orthopaedic and soft tissue surgical challenges. in Book Marine Biomaterials" (Isolation, Characterization and Application), CRC-Taylor & Francis publishers	Samit K. Nandi, Uttam Datta and Subhasish Biswas.	2013

**Department of VEPM :**

Name of book/ booklet/ handout/report/manual/ monograph/compendium/ package of practices, leaflet etc.	Name of the specific item published	Author / Co-Author (S)	Date of publication with issue page No. etc.
Book publication : Buffalo Medicine	Buffalo Medicine	Prof. Amalendu Chakrabarti, Chandan Lodh and Samiran Bandopadhyaya	Satish Serial Publishing House, Delhi. (2013)

Department of Veterinary Microbiology:

Name of book/ booklet/ handout/report/manual/ monograph/compendium/ package of practices, leaflet etc.	Name of the specific item published	Author / Co-Author (S)	Date of publication with issue page No. etc.
'VeterinaryBacteriology'	Textbook entitled 'Veterinary Bacteriology'	Dr. Indranil Samanta	New India Publishing Agency, New Delhi, India

Faculty of Fishery Sciences:**Department of Fish Processing Technology:**

Name of book/ booklet/ handout/report/manual/ monograph/compendium/ package of practices, leaflet etc.	Name of the specific item published	Author / Co-Author (S)	Date of publication with issue page No. etc.
Food Safety.	Study on Interaction between Staphylococcus aureus ATCC 25923 and Lactobacillus plantarum ATCC 8014 under anaerobic conditions on fish fillet.	S. Nath and S. Chowdhury	2013. Ed. P.K.Ray, Readers Service, Kolkata. Pp. 121-135.

Department of Aquaculture:

Name of book/ booklet/ handout/report/manual/ monograph/compendium/ package of practices, leaflet etc.	Name of the specific item published	Author / Co-Author (S)	Date of publication with issue page No. etc.
Project paper	'Performance of carp seed from mega seed project in farmer's pond- case study'	T.K.GHOSH; T.J. ABRAHAM; B.K. DAS& T.S.NAGESH	



Faculty of Dairy Technology:

Department of Dairy Chemistry:

Name of book/ booklet/ handout/report/manual/ monograph/compendium/ package of practices, leaflet etc.	Name of the specific item published	Author / Co- Author (S)	Date of publication with issue page No. etc.
Chapter of Book	Integrated and sustainable Dairying : A Tool for Poverty Eradication and Rural Prosperity.	P.R.Ray, P.K. Ghatak and A.K.Misra	2012. Published in Integrated Rural development and Management : Issues, Strategies and Policy Options. Agrobiosci India. P.78-83

DREF:

Name of book/ booklet/ handout/report/manual/ monograph/compendium/ package of practices, leaflet etc.	Name of the specific item published	Author / Co- Author (S)	Date of publication with issue page No. etc.
Survey Report	Aquaculture in Changing Climate of Sundarban - Survey Report on Climate Change Vulnerabilities, Aquaculture Practices & Coping Measures in Sagar & Basanti blocks of Indian Sundarban,	Chand B K, Trivedi R K, Biswas A, Dubey S K and Beg M	2012 pp.177.
Research Highlights	Research Highlights 2011-13 on NICRA entitled "Development of Climate Resilient Aquaculture Strategies for Sagar and Basanti Blocks of Indian Sundarban"	R. K. Trivedi, B.K. Chand, S. K. Rout, S. K. Dubey and M. M. Beg.	2013 pp.18
Training Manual	Aquaculture in changing climate of Sundarban (Sundarbaner Poribortito Jolobyute Mach Chas - Bengali Vernacular), pp. 60.	R. K. Trivedi, B.K. Chand, S. K. Rout, S. K. Dubey and M. M. Beg	2014 pp. 60.

HUMAN RESOURCE DEVELOPMENT (HRD) :

Participation in Conference, Training, Seminar, Symposia, Workshop etc.:

Faculty of Veterinary & Animal Sciences:

Department of Veterinary Public Health:

Title of the Seminar, Symposia, Workshop, Training attended	Venue	Duration	Name of the faculty member with Designation
10 th All India Conference and National symposium on "One World-One Health: Emerging Veterinary Public	WBUAFS, Kolkata.	2 Days 14th-15th December, 2012	Dr. C. Debnath, Assistant Professor Dr.A.K.Pramanik, Professor (contractual) Health Challenges and Strategies". Dr. Utpal Das, Guest lecturer

Department of Veterinary Medicine, Ethics & Jurisprudence:

Title of Seminar, Symposium, Workshop, Training attended	Venue	Duration	Name of faculty members with Designation
One World – One Health : Emerging Veterinary Public Health Challenges and Strategies.	West Bengal University of Animal & Fishery Sciences, Kolkata.	14-15 th December 2012	Prof. N. R. Pradhan, Professor, and Dr. C.Lodh, Associate Professor, Deptt.of VMEJ.
New Horizons in Companion Animal Health & Management.	Hotel Manvin's, Panaji, Goa.	6-8th February, 2013	Prof. N. R. Pradhan, Professor.
National Congress on Canine Practice and National Symposium on Strategy for Canine Health Care with Focus on Zoonotic Diseases.	Hotel Maurya, Patna, Bihar.	10-12 th January 2014	Prof. N. R. Pradhan, Professor and Dr. Chandan Lodh, Associate Professor.


Department of Veterinary & Animal Husbandry Extension Education:

Title of Seminar, Symposium, Workshop, Training attended	Venue	Duration	Name of faculty members with Designation
a. Challenges in Bio – diversity and Resource Management	University of Kalyani	26.02.13 27.02.13	Dr. A. Goswami Professor
b. Role of Communication system in behavioural change of meat consumers.	Park Hotel, Kolkata 5 th Mayors Conference by NMPPB, New Delhi, & WBUAFS.	11.02.13. 12.02.13.	-Do-
c. Towards a culture of Quality in Distance Education	Univ. of Kalyani	30.03.13.	-Do-
d. Skill development to impart training programmes to the farming community on A. H. & Fishery sector with their integrations.	DREF, WBUAFS	23.09.13.	-Do-
e. Convergence in activities of KVKS and ATMAS.	DREF, WBUAFS.	21.12.13.	-Do-
f. Drought Mitigation : Role of livestock in self employment in Drought Prone Area of W. B.	A. T. I., Govt. of W. B.	13.11.13.	-Do-
g. Animal Husbandry Practices vis – a – vis Rural Health Management.	DREF, WBUAFS.	25.02.14	Do-
h. Integration of livestock & Fisheries for sustainable farming.	K. V. K., Balurghat, UBKV.	04.03.14	-Do-
i. 10th All India Conference of APHV and National symposium on “One World- our Health”.	WBUAFS, Kolkata	14- 15 Dec., 2012	Dr. D. Ganguli
j. National Conference on Challenges in Biodiversity and Resource Management	University of Kalyani, Kalyani, W. B.	26- 27 Feb, 2013	-Do-
k. Convergence in activities of	DREF, WBUAFS.	21.12.13.	-Do-

Department of Teaching Veterinary Clinical Complex:

Title of Seminar, Symposium, Workshop, Training	Venue	Duration	Name of faculty member with Designation
32nd Annual Convention of Indian Society for veterinary Medicine and International symposium on “The 21st Century Road Map for Veterinary Practice, Education & Research in India & Developing Countries”	SKUAS & T, Jammu, R.S. Pura	14.02.14 to 16.02.14	Dr. S. Chaudhuri Asstt. Professor (Veterinary Medicine)



Department of Veterinary Pathology:

Title of Seminar, Symposia, Workshop, Training	Venue	Duration	Name of the faculty member with Designation
National Seminar on Food Safety-Role of Standards	Kolkata	10 th July, 2012	Dr. S.K. Mukhopadhyay, Associate Professor
National Seminar on Food Safety-Role of Standards	Kolkata	10 th July, 2012	-Do-
XXth Annual State Conference IAPM. West Bengal Chapter	Kolkata	30 th September, 2012	-Do-
National Conference on Sustainable Development through Innovative Research in Science and Technology	Kolkata	28-29 th September, 2012	-Do-
Pathology of Aquatic Animals, Farmed & Laboratory Fish Including Integrated Aquaculture and Waste Management	Hisar	8th November, 2012	-Do-
System of Governance in Higher Education.	Paschim Medinipore	8th December 2012.	-Do-
Workshop on Green Rating of Indian Iron and Steel Sector (supported by: UNDP-MoEF)	Kolkata	31st August 2012	-Do-
6th International Advance Medicare & Forensic Science Medicine Congress Ramkrishna Mission Institute of Culture (Brahmananda Hall)	Kolkata	22nd December 2012	-Do-
20th West Bengal State Science & Technology Congress – 2013	Shibpur	28th Feb-March 2, 2013	-Do-
Advances in Molecular and Serological Tools in Fish Disease Diagnosis	Winter School, Central Institute of Freshwater Aquaculture, Bhubaneswar.	9-29th November, 2013	Dr. N. C. Patra



Department of Veterinary Parasitology:

Title of seminar, symposium, workshop	Venue	Duration	Name of the faculty member
Molecular Biological approaches for diagnosis and control of parasitic diseases	Division of Parasitology, IVRI	2 nd -22 nd December, 2013	Dr. S. Baidya
XXII National Congress of Veterinary Parasitology	Department of Parasitology, C.V.S. & A.H., UP, Mathura.	15-17 th March, 2012	
XXIII National Congress of Veterinary Parasitology	CVSC, Khanapara, Guwahati, Assam.	12-14, Dec, 2012	Prof. J.D. Ghosh
XXIII National Congress of Veterinary Parasitology	CVAS, Mannuthy, Thrissur, Kerala	5 th to 7 th February, 2014	

Department of Veterinary Microbiology:

Title of Seminar, symposium, workshop, training attended	Venue	Duration	Name of Faculty members with designation
19 th West Bengal State Science & Technology Congress	Saha Institute of Nuclear Physics, Salt Lake, Kolkata	1 st – 2 nd March, 2012	Dr. Indranil Samanta, Lecturer
CPCSEA Eastern zonal workshop on laboratory animal experimentation, organized by CPCSEA	RG Kar Medical College, Kolkata	4th May 2012	Dr. Indranil Samanta, Lecturer
International Seminar on "Future of livestock health: a paradigm change to maximize productivity for economic gains"	TANUVAS, Chennai	6 th to 8 th September 2012.	Dr. Indranil Samanta, Lecturer
International Conference on "Rational use of medicines for safer therapeutics"	RG Kar Medical College, Kolkata	29 th November-1 st December, 2012	Dr. Indranil Samanta, Lecturer
National Conference of Association of Public Health Veterinarians (APHV) on "One health one world" WBUAFS, Kolkata	WBUAFS, Kolkata	14 th to 15 th December 2012	Dr. Indranil Samanta, Lecturer
20 th West Bengal State Science & Technology Congress	Bengal Engineering and Science University, Shibpur, West Bengal	28 th February – 2nd March 2013	Dr. Indranil Samanta, Lecturer
UGC sponsored national conference on "Biodiversity: interrelationship between flora, fauna and human"	Mrinalini Dutta Mahavidyalaya, Birtai	29-30 September, 2013	Dr. Indranil Samanta, Lecturer
21 st West Bengal State Science & Technology Congress	Burdwan University, West Bengal	20 th February-21 st February 2014	Dr. Indranil Samanta, Lecturer



Title of Seminar, symposium, workshop, training attended	Venue	Duration	Name of Faculty members with designation
Winter school training on "Expression of immunogenic genes in heterologous systems and its usage in animal disease diagnosis and vaccines"	Division of Veterinary Biotechnology, IVRI, Izatnagar	Nov.7-27, 2013	Dr. Samir Dey, Lecturer
Winter school training on "Expression of immunogenic genes in heterologous systems and its usage in animal disease diagnosis and vaccines"	Division of Veterinary Biotechnology, IVRI, Izatnagar	Nov.7-27, 2013	Dr. D.P. Isore, Lecturer
X th Annual Conference and National symposium on "One World-One Health: Emerging Veterinary Public Health Challenges and strategies" organised by Association of Public Health Veterinarians	WBUAFS, Kolkata	14-15 December, 2012	Dr. Samir Dey, Lecturer
21st West Bengal State Science and Technology Congress	Burdwan University, Burdwan	20-21 Feb.,2014	Dr. Samir Dey, Lecturer
X th Annual Conference and National symposium on "One World-One Health: Emerging Veterinary Public Health Challenges and strategies" organised by Association of Public Health Veterinarians	WBUAFS, Kolkata	14-15 December, 2012	Dr. Kunal Batabyal, Lecturer
21st West Bengal State Science and Technology Congress	Burdwan University, Burdwan	20-21 Feb., 2014	Dr. Kunal Batabyal, Lecturer
19th West Bengal State Science & Technology Congress	Saha Institute of Nuclear Physics, Salt Lake, Kolkata	1st – 2nd March, 2012	Dr. S. N. Joardar, Reader
CPCSEA Eastern zonal workshop on laboratory animal experimentation, organized by CPCSEA	RG Kar Medical College, Kolkata	4th May 2012	Dr. S. N. Joardar, Reader
International Seminar on "Future of livestock health: a paradigm change to maximize productivity for economic gains"	TANUVAS, Chennai	6th to 8th September 2012.	Dr. S. N. Joardar, Reader
Workshop on Advances in diagnosis and therapeutic measures in livestock ailments at West Bengal Veterinary Council, org. by West Bengal Veterinary Council, WBUAFS and Directorate of A.R.& A.H., WB	West Bengal Veterinary Council, WBUAFS	21-23 November 2012	Dr. S. N. Joardar, Reader



Title of Seminar, symposium, workshop, training attended	Venue	Duration	Name of Faculty members with designation
National Conference of Association of Public Health Veterinarians (APHV) on "One health one world"	WBUAFS, Kolkata	14th to 15th December 2012	Dr. S. N. Joardar, Reader
100th Indian Science Congress. Org. by The Indian Science Congress Association	University of Calcutta	3rd -7th January, 2013.	Dr. S. N. Joardar, Reader
20th West Bengal State Science & Technology Congress	Bengal Engineering and Science University, Shibpur, West Bengal	28th February – 2nd March 2013	Dr. S. N. Joardar, Reader
21st West Bengal State Science and Technology Congress	Burdwan University, Burdwan	20-21 Feb., 2014	Dr. S. N. Joardar, Reader
Nation Science Day Celebration, 2014 Org. by SAB	Jadavpur University, Kolkata	28th February, 2014	Dr. S. N. Joardar, Reader

Department of Instructional Livestock Farm Complex:

Title of Seminar, symposium, workshop, training attended	Organized by	Venue	Duration	Name of Faculty members with designation
Workshop on "National Initiative on Fodder Technology Demonstration (NIFTD)"	IGFRI, Jhansi	BCKV, Kalyani	19 th -20 th December, 2013	Dr. Dulal Ch. Roy Assistant Professor (Agronomy)
National seminar on "Agriculture and Bio-security"	PSB, Visva-Bharati	Dept. of ASEPAN, PSB, Visva -Bharati	1st -3rd February, 2014	Dr. Dulal Ch. Roy Assistant professor (Agronomy)
"National conference on Biodiversity-2014"	National Biodiversity Board	Science City Auditorium, Kolkata and Jadavpur University	16th -18th January, 2014	Dr. Aruna Pal, Assistant professor (AGB)
International Conference on & "Reproductive Health: Issues Strategies under changing Climate Scenario"	Indian Society for the Study of Reproduction and Fertility	Indian Veterinary Research Institute, Izatnagar, Bareilly.	6th to 8th February, 2014	Dr. Aruna Pal, Assistant professor (AGB)

**Department of Veterinary Biochemistry:**

Title of Seminar, symposia, workshop, training attended	Venue	Duration	Name of Faculty members with designation
Role of Clinical Biochemistry as aid in disease Diagnosis in Domestic animals	IVRI (ERS), Kolkata	2 Days 15.09.2012 and 16.09.2013	Dr. S. Batabyal
Haemato-biochemical techniques of farm animals	DREF, WBUAFS, Kolkata	2 Days 07.09.2013 and 28.09.2013	Dr. S. Batabyal
Role of enzymes and iso-enzymes in disease diagnosis			Dr. S. Batabyal
Clinical biochemistry and disease diagnosis Advanced biochemical techniques in disease diagnosis	West Bengal Veterinary Council, Kolkata	3 Days 25.09.2013 to 27.09.2013	Dr. S. Batabyal Dr. S. Batabyal
Participated and presented paper in 81st Annual Meeting of Society of Biological Chemists (India)	Science City Auditorium, Kolkata	4 Days November 8-11, 2012	Dr. S. Batabyal
Participated and presented paper on 100th Indian Science Congress	Calcutta University, Kolkata.	6 Days January 2-7, 2013	Dr. S. Batabyal

Department of Veterinary Epidemiology & Preventive Medicine:

Title of Seminar, symposium, workshop, training attended	Venue	Duration	Name of Faculty members with designation
CPCSEA Eastern Zonal Workshop on Laboratory Animal Experimentation	Ministry of Environment and Forests	4 th May 2012	Dr. Ujjwal Biswas, Reader
National Symposium on "One World-One Health: Emerging Veterinary Public Health Challenges and Strategies"	Department of Veterinary Public Health and Epidemiology, WBUAFS, Kolkata	14 th to 15 th December, 2012	Dr. Chanchal Guha, Professor Dr. Ujjwal Biswas, Reader Dr. Partha Sarathi Jana, Lecturer
National Symposium on "Advancing Veterinary Medicine and its Specialities for Augmented Productivity and Health: Issues and Strategies in Farm and Companion Animals"	Department of Veterinary Medicine, College of Vety. Sc. and Animal Husbandry, Mhow, NDVSU, Jabalpur (M.P.)	9 th to 11 th January, 2013	Dr. Chanchal Guha, Professor Dr. Ujjwal Biswas, Reader Dr. Partha Sarathi Jana, Lecturer



Title of Seminar, symposium, workshop, training attended	Venue	Duration	Name of Faculty members with designation
Multipronged Approaches for Surveillance and Diagnosis of Brucellosis	Project Directorate on Animal Disease Monitoring and surveillance (PD_ADMAS), Hebbal, Bengaluru	19.02.2013 to 28.02.2013	Dr. Ujjwal Biswas, Reader
International Symposium on "The 21st Century Road Map for Veterinary Practice, Education and Research in India and Developing Countries"	Division of Vety. Medicine, Faculty of Vety. Sciences and Animal Husbandry, SKUAST, J & K.	14 th to 16 th February, 2014	Dr. Chanchal Guha, Professor Dr. Ujjwal Biswas, Reader Dr. Partha Sarathi Jana, Lecturer

Department of Animal Nutrition:

Title of Seminar, symposium, workshop, training attended	Venue	Duration	Name of Faculty members with designation
"World Camp at Thailand:2014" of International Youth Fellowship	Phetchaburi Rajabhat University, 38 Moo 8 Hardjaosumran Rd. Nawong Muang Phetchaburi, Thailand	3rd to 8th February 2014.	Prof. Purnendu Biswas
54th symposium Managing Uncertainties in Indian Livestock Sector" CLFMA of India	Kolkata	13th and 14th September, 2012.	Prof. T.K. Ghosh
National Symposium KVK	Ludhiana	20.11.2012 to 24.11.12	Prof. T.K. Ghosh
QRT meeting (NRC on Yak),	Dirang, Arunachal Pradesh	10.10.12 to 15.10.12	Prof. T.K. Ghosh
Short course on "Precision Feeding and Nutrigenomic Modulation of Underlying Physiology To Ameliorate Stress and Promote Production in Livestock	National Institute of Animal Nutrition and Physiology, Bangalore	September 4-13, 2013	Dr. Paresh Nath Chatterjee

**Department of Veterinary Surgery & Radiology:**

Title of training Seminar, symposia, workshop	Venue	Duration	Name of Faculty members
14th National conference of Association for Prevention and control of Rabies in India (APCRI),	Park Hotel, Kolkata	6 th -8 th july, 2012	Dr.DR. A Maji
ICAR, CAFT training” Current clinical techniques and protocols in farm and pet animal practice	Madras Vety. College, TANUVAS, Chennai	August 2012 For 21 days	DR. A Maji
Paper presentation and as zonal secretary,ISVS, EC meeting attending at 36 th Annual conference of Indian Society of Veterinary Surgery at Anand Vety. College, Gujarat	Anand Vety. College, Gujarat	Nov 1-3, 2012.	DR. A Maji
10th All India Conference and Symposium of Association of Public Health Veterinarian	Kolkata	14th-15th December, 2012	DR. A Maji
Invited for Lead paper Presentation and ISACP AWARD receiving ceremony at 10th national conference of Indian society for Advancement of Canine Practice	Panjim, Goa.	5th-7th Feb., 2013	DR. A Maji
Presented paper at 15th International conference and Symposium of APCRI (Rabies control)	Hotel Hyat Regency, Pune in	6th-8th July, 2013	DR. A Maji
Short Course on “Computational Biology, Bioinformatics and Their Application to Health Care”	IIT,kharagpur	5(five) days (28.10.2013 to 01.10.201)	DR. A Maji
Acted as Co-Chairman in Ruminant Surgery Session and presented Papers in 37th National Symposium of Ind. Society for Vet. Surgery	Thrissur Vety.College, Kerala	6th to 8th Nov., 2013	DR. A Maji
Invited Lead Paper Presentation and acted as Rapoteur in Canine Surgery Session in National Symposium of ISACP	Patna, Bihar	10th to 12th Feb 2014	DR. A Maji
UGC sponsored Refreshers courses on Current Clinical Techniques and Protocols in Farm and Pet Animal Practice.	TANUVAS, Madras Veterinary College Chennai.	01-21st August, 2012	Shyamal Kanti Guha
Oral presentation in Orthopaedic Surgery Session in XXXV Annual Congress of Indian Society for Veterinary Surgery and International Symposium on Nanobiomaterials in Biomedical Research: their application in Veterinary Surgery.	Kolkata	6-8th November, 2012	Shyamal Kanti Guha



Title of training Seminar, symposia, workshop	Venue	Duration	Name of Faculty members
International Workshop on Small Animal Ophthalmic Surgery	TANUVAS, Chennai	9-10 th April, 2013	Shyamal Kanti Guha
Poster presentation in establishment of iPS cells and embryonic stem cells in goat: A lineage differentiation into germ cell (VSA P-23) in 100th Indian science Congress.	Calcutta University, Kolkata	3-7th January 2013	Shyamal Kanti Guha
Poster presentation in Osteogenic differentiation of mesenchymal stem cells isolated from goat adipose tissue (VSA P-24) in 100th Indian science Congress	Calcutta University, Kolkata	3-7th January 2013	Shyamal Kanti Guha
UGC sponsored Short Term courses on Disaster management	Academic Staff College, Jadavpur University	25-26th March 2013	Shyamal Kanti Guha
UGC sponsored Refreshers courses on Recent Development on Nanoscience and and Technology.	Jadavpur University	10th -30th Sept 2013	Shyamal Kanti Guha
Oral presentation in National conference on "Need for specialization and superspecialization in veterinary surgery and imaging techniques for professional efficiency development"	College of veterinary & animal Sciences, Kerala Veterinary and Animal Sciences University, Thrissur	Kerala, 6-8th November, 2013	Shyamal Kanti Guha
Oral presentation in 14th National conference on "Towards a sustainable Rabies Control Programme in India"	Park Hotel, Kolkata	7-8th July, 2012	Shyamal Kanti Guha
Attended pre conference workshop on Rabies Control Programme in India	Science City, Kolkata	6th July, 2012	Shyamal Kanti Guha
Oral presentation on " application of stem cells in treatment of osteoarthritis in hip joint of canine" in 2nd Pharma Technical IAPST International conference on "New insights into diseases and recent therapeutic approaches".	Jadavpur university, Kolkata	17-19th January, 2014	Shyamal Kanti Guha
Poster presentation in 2nd International and 4th National conference of Indian Society for Rational Pharmacotherapeutics On "Role of Rosuvastatin in segmental fracture healing of Rabbits".	R.G.Kar Medical College, Kolkata	29th November to 1st December, 2012	Shyamal Kanti Guha



Title of training Seminar, symposia, workshop	Venue	Duration	Name of Faculty members
Refresher course on "Recent trends in biomedical engineering" UGC sponsored	Jadavpur University	11th to 30th June 2012	Dr. S Hazra
Glaucoma Symposium 2012 "Glaucoma, IOP optic nerve and beyond", and hands on training in trabeculectomy, SICS trab, Ahmed Valve, at L.V.Prasad eye hospital	Bhubaneswar	21st -22nd July 2012	Dr. S Hazra
Paper presentation at 20th Annual Meeting of Indian Eye Research Group-ARVO India	India	28th -29th July 2012.	Dr. S Hazra
Paper presentation at Annual conference of Indian Society of Veterinary Surgery	Ahmedabad	Nov 1-3, 2012	Dr. S Hazra
Invited for talk at the at the INDO-US meeting on Novel tools for Vision research	Hyderabad.	21st -22nd January 2013	Dr. S Hazra
Invitation for participation at one day Brainstorming Session on "Silk Proteins and their biomaterial / biomedical applications"	CSB Complex, Bangalore	27th May, 2013	Dr. S Hazra
Invited talk at one day symposium on "BIG-think tank on eye research"	Bhubaneswar.	October, 2013	Dr. S Hazra
Paper presentation at International Eye Research conference ASIA-ARVO, Refresher course on Recent advances in Nanoscience and Technology	Jadavpur University	10th -30th Sept 2013	Dr. S Hazra
Paper presentation at World Ophthalmology Congress,	Tokyo Japan	2nd-6th April 2014,	Dr. S Hazra
Delivered a Lead paper on "Biomaterials in orthopaedic surgical challenges" in XXXVI Annual Congress of ISVS and international Symposium on "Ruminant Surgery in Polyclinics Co-operative dairies and Shelters: Perspective 2020"	Anand Veterinary College, Gujrat	November 1-3, 2012	Samit Kumar Nandi
Invited lecture on "Protein Growth factors and Snail Extract loaded porous coralline hydroxyapatite scaffold" in International Conference	Indian Institute of Science, Bangalore	December 9-11, 2012	Samit Kumar Nandi



Title of training Seminar, symposia, workshop	Venue	Duration	Name of Faculty members
on Design of Biomaterials, XXIII Annual Meeting of SBAOI & VI Annual General Meeting of STERMI Oral presentation in The Indian Science Congress on "Autologous bone marrow in animal model" in the section of Animal, Veterinary and Fishery Sciences	Calcutta University, Kolkata	January 3-7, 2013	Samit Kumar Nandi
Oral presentation in National Scientific Symposium on "Optimization of Livestock Production: Key regulator of rural economy"	Kolkata	10-11th January, 2013	Samit Kumar Nandi
Oral presentation on "In vivo evaluation of bone regeneration of growth factor loaded marine coral implant" in National conference on challenges in Biodiversity and Resource Management	University of Kalyani, Kalyani, West Bengal	26-27th February 2013	Samit Kumar Nandi
Oral presentation in National conference on "Need for specialization and superspecialization in veterinary surgery and imaging techniques for professional efficiency development"	College of veterinary & animal Sciences, Kerala Veterinary and Animal Sciences University, Thrissur	Kerala, 6-8th November, 2013	Samit Kumar Nandi
Invited lecturer in Panel discussion on the theme "Young Scientist Vision on scientific Excellence" 5th Indian Youth Science Congress, Leading Mind into Ever-Widening Thought and Action,	Organized by M.S. Swaminathan Research Foundation at Viswa Bharati University, Shantiniketan, West Bengal	6-9th December, 2013.	Samit Kumar Nandi
Oral presentation on "Development of SiO ₂ and ZnO doped 3D printed β -TCP scaffolds in bone regeneration" in 2nd Pharma Technical IAPST International conference on "New insights into diseases and recent therapeutic approaches"	Jadavpur university, Kolkata	17-19th January, 2014	Samit Kumar Nandi

**Department of Livestock Production Management:**

Title of Seminar, symposium, workshop, training attended	Venue	Duration	Name of Faculty members with designation
National Symposium on Buffalo for Sustainable Food Security and Annual General body meeting of Indian Society for Buffalo Development	F/O-Vety. Sc, AAU, Khanapara, Guwahati	March 15-16, 2013	Prof. A.K. Samanta
National Symposium on "One World-One Health: Emerging Veterinary Public Health Challenges and Strategies"	Dept. of VPHE, WBUAFS, Kolkata	December 14-15, 2012	Dr. S. Bera
National Conference on "Challenges in Biodiversity and Resource Management"	Dept. of Zoology, University of Kalyani	February 26-27, 2013	Dr. S. Bera
National Seminar on "New dimensional approaches for livestock productivity and profitability enhancement under era of climate change"	Dept. of LPM, AAU, Anand, Gujrat	January 28-30, 2014	Prof. S. Pan
Short course on "Precision Feeding and Nutrigenomic Modulation of Underlying Physiology to Ameliorate Stress and Promote Production in Livestock"	NIANP, Bangalore	September 4-13, 2013	Dr. S. Bera
Training programme on "Latest Techniques in Value Added Poultry Products Preparation and Marketing"	CAFT, Dept. of Poultry Science, VCRI, Namakkal	January 22 to February 11, 2014	Dr. S. Bera

Department of Veterinary Pharmacology & Toxicology:

Title of Seminar, symposia, workshop, training attended	Venue	Duration	Name of Faculty members with designation
National seminar on Agriculture and Bio-security In changing scenario	Dept. of ASEPAN, Palli Siksha Bhavana (Institute of Agriculture), Visva Bharati	3 days 1st to 3rd February, 2014	T.K. Mandal
46 th Annual Conference of Indian Pharmacological Society (IPS)	Bangalore	3 days 16th Dec. to 18th Dec., 2013	T.K. Mandal and T.K. Sar
Workshop on "Analytical Technique for Biological Matrix"	Department of Pharmacology and Toxicology, Faculty of Veterinary and Animal Science, WBUAFS, Mohanpur Campus	1 day January, 2014	T.K. Mandal and T.K. Sar



Title of Seminar, symposia, workshop, training attended	Venue	Duration	Name of Faculty members with designation
4 th World Congress on Bioavailability and bioequivalence :Pharmaceutical R&D summit	Double Tree by Hilton, Beijing, China	3 days 20th May to 22nd May, 2013	T.K. Sar
International conference on translational pharmacology	NIMHANS Convention Centre, Bangaluru	2 days 16th Dec. to 17th Dec., 2013	T.K. Sar
Biodiversity Interrelationship between flora, fauna and human	Mrinalini Datta Mahavidyapith, Birati, Kolkata	2 days 29th Sept. to 30th Sept., 2013	T.K. Sar
23rd Annual conference of Indian Pharmacological Society, West Bengal Branch	Nilratan Sircar Medical College, Kolkata	1 day 23rd Nov., 2013	T.K. Mandal and T.K. Sar
57th Annual Conference	Indian Public Health Association Science City, Kolkata	3 days 1st Feb. to 3rd Feb., 2013	T.K. Sar
West Bengal State Science & Technology Congress, 2013	Bengal Engineering and Science University, Shibpur	3 days 1st Feb., to 2nd March, 2013	T.K. Sar
22nd Annual Conference	Indian Pharmacological Society, West Bengal Branch, IPGMER, Kolkata	1 day 23rd Feb., 2013	T.K. Mandal and T.K. Sar
XLIII Re-Union	West Bengal University of Animal & Fishery Science, Kolkata	2 days 20th May to 22nd May, 2013.	T.K. Mandal and T.K. Sar
Celebration of International Clinical Trials Day, 2013	School of Tropical Medicine, Kolkata	1 day 20th May, 2013	T.K. Mandal
Seminar on 'Food Safety'	Dept. of Pharmacology and Toxicology, WBUAFS	1 day 11th December, 2013	T.K. Mandal and T.K. Sar
CPCSEA Eastern Zonal Workshop on laboratory animal experimentation	R.G. Kar Medical College and WBUAFS, Kolkata	1 day 4th May, 2012	I.K. Mandal and I.K. Sar

Department of Animal Genetics & Breeding:

Title of Seminar, symposium, workshop, training attended	Venue	Duration	Name of Faculty members with designation
Multi-Stakeholders Consultative Workshop on "Opportunities, Challenges & Strategies in Animal Biotechnology"	NDRI, Karnal, Haryana, India. Organized by NIAB; Agri Biotech Foundation.	18.03.2013 to 19.03.2013 (2 day)	Prof. P.K. Senapati



Title of Seminar, symposium, workshop, training attended	Venue	Duration	Name of Faculty members with designation
Brain storming workshop on “Strategy related to conservation and productivity enhancement of Farm Animal Genetic Resources”	ICAR, New Delhi, India. Organized by ICAR, New Delhi.	10.01.2014 (1 day)	Prof.P.K. Senapati
“Prani Kalyane Prani sampad”	Kotulpur Block Headquarter Kotulpur, Dist-Bankura, West Bengal. Organized by Deputy Director, ARD & PO, Bankura.	29.01.2013 (1 day)	Dr. Manoranjan Roy
“Orientation training programme for officers of ARD Department of Bankura District”	Training Hall, ARD Department, Dist-Bankura, West Bengal Organized by Deputy Director, ARD & PO, Bankura.	05.06.2013 (1 day)	Dr. Manoranjan Roy
”Updates on male infertility, semen technology and quality oocytes production”	ICAR Centre of Advanced Faculty Training, Department of Veterinary Gynaecology and Obstetrics, Guru Angad Dev Veterinary & Animal Sciences University, Ludhiana-141004 India Organized by Department of Veterinary Gynaecology and Obstetrics, Guru Angad Dev Veterinary & Animal Sciences University, Ludhiana- 141004, India	16.09.2013 to 07.10. 2013 (21 day)	Dr. Manoranjan Roy
“Brain Storming Session on Management of Fertility in Dairy Animals” as Invitee Member	National Dairy Research Institute, Eastern Regional Station, Kalyani, West Bengal	26.03.2013 (1 day)	Dr. Uttam Sarkar
“Resource Person in the Master Trainers’ Training Course” 12-23 rd Sept., 2013	Director of Research, Extension and Farms, West Bengal University Animal and Fishery Sciences, Kolkata-700037	20.09.2013 (1 day)	Dr. Uttam Sarkar
“Data Analysis using SAS”	Central Research Institute for jute and Allied Fibres, Nilganj, Barackpore, West Bengal	1-6th july, 2013 (6 days)	Dr. Uttam Sarkar



Department of Anatomy & Histology:

Title of Seminar, symposium, workshop, training attended	Venue	Duration	Name of Faculty members with designation
Annual convention of Anatomical society of India (W.B.Chapter)	Department of Anatomy, N.R.S. Medical College,	18th, January 2013	Prof. S.Ray Prof.R.K.Ghosh
National Symposium and Annual Convention of Indian Association of Veterinary Anatomists.	Department of Vety. Anatomy & Histology, C.V.Sc & A.H,Bikaner	8th to 10th January 2014	Prof.R.K.Ghosh Dr P.Das
Annual convention of Anatomical society of India(W.B.Chapter)	Department of Anatomy, Kolkata Medical College	18th January, 2014	Prof. Sanjay Ray Prof.R.K.Ghosh Dr P.Das

Department of Veterinary Physiology:

Title of Seminar, symposia, workshop, training attended	Venue	Duration	Name of Faculty members with designation
21stSAPI conference and national symposium on 'Physiological research in changing environmental scenario for sustainable livestock and poultry production'	Navsari, Gujrat	3 days, 6-8 Nov, 2012	Dr. Pradip Kumar Das
21stSAPI conference and national symposium on 'Physiological research in changing environmental scenario for sustainable livestock and poultry production'	Navsari, Gujrat	3 days 6-8 Nov, 2012	Dr. Prabal Ranjan Ghosh
21stSAPI conference and national symposium on 'Physiological research in changing environmental scenario for sustainable livestock and poultry production'	Navsari, Gujrat	3 days 6-8 Nov, 2012	Dr. Guru. D.V. Pandiyan
National symposium on 'emergent frontiers in backyard poultry farming'	Mohanpur,	1 day, 24th Nov, 2012	Dr. Pradip
National symposium on 'emergent frontiers in backyard poultry farming'	Mohanpur,	1 day, 24th Nov, 2012	Dr. Prabal
22nd SAPI conference and national symposium on 'Physiological neutri-genomic interventions to augment food security and animal welfare'	Mathura, UP	3 days 19-21 Nov, 2013	Dr. Pradip Kumar Das
22nd SAPI conference and national symposium on 'Physiological neutri-genomic interventions to augment food security and animal welfare'	Mathura, UP	3 days 19-21 Nov, 2013	Dr. Prabal Ranjan Ghosh
National Science day celebration	Kolkata, WB	1 day, 2nd Feb, 2013	Dr. P. K. Das
100th National Science Congress	Kolkata, WB	5 day, 3-7th Jan, 2013	Dr. Joydip Mukherjee



Title of Seminar, symposia, workshop, training attended	Venue	Duration	Name of Faculty members with designation
100th National Science Congress	Kolkata, WB	5 day 3-7th Jan, 2013	Dr. Kinsuk Das
100th National Science Congress	Kolkata, WB	5 day 3-7th Jan, 2013	Dr. Prabal Ranjan Ghosh
Zonal level National Veterinary Physiology Quiz 2013	Guwahati, Assam	1 day 5th Oct.,2013	Dr. Joydip Mukherjee
Zonal level National Veterinary Physiology Quiz 2013	Guwahati, Assam	1 day 5th Oct.,2013	Dr. Dipak Banerjee

Department of Veterinary Gynaecology & Obstetrics :

Title of Seminar, symposium, workshop, training attended	Venue	Duration (Dates)	Name of Faculty member with designation
The XXIX Annual convention and National Symposium on " Frontier Reproductive Biotechnologies for Enhancing Animal Fertility and Fecundity: Global Perspective"	Department of ARGO, Nagpur Veterinary College, Seminary Hills, Nagpur-440006	January 08 -10, 2014.	Prof.(Dr.) Siddhartha Basu, Professor
The XXVIII Annual Convention of The Indian Society for Study of Animal Reproduction and National Symposium on "Addressing Animal Reproductive Stresses Through Biotechnological Tools"	Department of Animal Reproduction, Gynaecology & Obstetrics College of Veterinary Science, Assam Agricultural University Khanapara, Guwahati, Assam	November 21-23, 2012	
"Optimization of Livestock Production : Key Regulator of Rural Economy" organized by Scientific Sub- Committee, XLIII Re-Union of students of Bengal Veterinary College held at WBUAFS, Kolkata	WBUAFS, Kolkata	14th & 15th December, 2012.	Dr.(Mrs.) Kalyani Ray Reader
"One World-One Health: Emerging Veterinary Public Health challenges and strategies" organized by the ASSOCIATION OF PUBLIC HEALTH VETERINARIANS in collaboration with the Department of Veterinary Public Health& Epidemiology,	WBUAFS, Kolkata	10th & 11th January, 2013	



Title of Seminar, symposium, workshop, training attended	Venue	Duration (Dates)	Name of Faculty member with designation
National Seminar on Dairy Development in Eastern India-constraint & Remedies	Indian Diary Association (East Zone)	07-14.12 (One day).	Dr. Pramode Ranjan Nandi
National Symposium on Hemodynamic Clinical & Engineering aspects	School of Bioscience & Engineering, IIT	17-18 Aug 12 (Two days).	Dr. Pramode Ranjan Nandi
National level Seminar on System of governance in Higher Education	Dept of Political Science, Midnapur College	08-12-12 (one day).	Dr. Pramode Ranjan Nandi
National Seminar on Higher Education in 12 th five year plan : Agenda, Role of Teachers & Teacher's movements	M.G.Kashi Vidyapith, Varanasi	15-17 Dec. 2012 (three days).	Dr. Pramode Ranjan Nandi
100 th Indian Science Congress held at Calcutta University	Indian Science Congress Association	3rd to 7th January, 2013.	Dr. Pramode Ranjan Nandi
20 th West Bengal State Science & Technology congress	Bengal Engineering & Science University, Shibpur	28th Feb to 2nd Mar, 2013 (3 days)	Dr. Pramode Ranjan Nandi
Second Pharm. Tech IAPST International conference on New Insights into Diseases and recent Therapeutic Approaches "	Dept of Pharmaceutical Technology, Jadavpur University	17th to 19th January 2014. (3 days).	Dr. Pramode Ranjan Nandi
National Congress of Canine Practice on Strategy for Canine Health Care with focus on Zoonotic diseases	Indian Association for advancement of Canine practice and Bihar Veterinary College, Patna	10th to 12th Feb 2014. (3 days).	Dr. Pramode Ranjan Nandi
International Conference on Molecular Biology and its Applications	Dept of Life Science and Biotechnology, Jadavpur University	14 th & 15 th Feb 2014. (2 days).	Dr. Pramode Ranjan Nandi
21 st West Bengal State Science and Technology Congress 2014	Burdwan University and West Bengal State Science and Tech. council and Dept. Govt. of West Bengal held at Burdwan.	20-21 Feb 2014 (2 days).	Dr. Pramode Ranjan Nandi

**Faculty of Fishery Sciences:****Department of Fishery Resource Management:**

Title of Seminar, symposium, workshop, training attended	Venue	Duration (Dates)	Name of Faculty member with designation
100 th Indian Science Congress	Kolkata.	3-7, January, 2013	Prof. S.K. Das;
PAF Congress on Public-Private Partnership in Aquaculture and Culture based fisheries.	CIFRI, Barrackpore, Kolkata	9-11 February 2013	Prof. S.K. Das; Dr. Nagesh T.S. Dr. S. Behera
24TH All India Congress of Zoology & National Seminar on "Biodiversity and its Management for Food, Livelihood & Environmental Security" & National Helminthological Congress	Kalyani University, Kalyani, West Bengal	23-25 November, 2013	Dr. Nagesh T.S. Dr. S. Behera
National Seminar on Employment through Aquaculture.	KBDV College, Nirakarpur, Khorda, Odisha	8th April, 2012	Prof. S.K. Das;

Department of Aquatic Environment Health:

Title of Seminar, symposium, workshop, training attended	Venue	Duration	Name of Faculty member with designation
International training programme for Cambodian fish farmer on "Freshwater Fish seed production and nursery rearing in West Bengal, India"	WBUAFS, Kolkata	5-10 November, 2012	Dr. R.K.Trivedi. Professor
International training programme for Cambodian fish farmer on "Freshwater Fish seed production and nursery rearing in West Bengal, India"	WBUAFS, Kolkata	5-10 November, 2012	Dr. S.K.Rout. Associate Professor
Global Symposium on 'Aquatic Resources for Eradicating Hunger and Malnutrition- Opportunities and Challenges'.	Asian fisheries Society Indian Branch (AFSIB), Manglore, Karnataka, India.	3-6 December, 2012	Dr. R.K.Trivedi. Professor
National Symposium on 'Climate change and Indian Agriculture: Slicing down the uncertainties'.	CRIDA, Hyderabad	22-23 January, 2013	Dr. R.K.Trivedi. Professor
PAF congress on 'Public private partnership in aquaculture and culture based fishery'.	CIFRI, Barrackpore	9-11 February, 2013	Dr. R.K.Trivedi. Professor
PAF congress on 'Public private partnership in aquaculture and culture based fishery'.	CIFRI, Barrackpore	9-11 February, 2013	Dr. S.K.Rout. Associate Professor



Title of Seminar, symposium, workshop, training attended	Venue	Duration	Name of Faculty member with designation
Rotary Community Carps Conference on "Animal Husbandary & Pisciculture, Rotary International Districts".	Salt Lake Stadium, Kolkata	3-4 March, 2013	Dr. B.K.Das, Professor
Participated as expert in the consultation meeting at NCSCM, Ministry of Environment and Forest, Govt. of India on "Delineation & mapping of coastal & marine ESA in India"	NCSCM, Chennai	21.10.2013	Dr. R.K.Trivedi, Professor
Invited as lead speaker in the 10th national symposium on 'Managing Natural Resources for Enhancing Agricultural and Allied Productivity in Coastal Region under Changing Climate'	CSSRI, RRS, Bharuch (Gujarat)	December 11-14, 2013	Dr. R.K.Trivedi, Professor
Fish Farmers training on Climate Resilient Aquaculture for Sundarban.	Basanti, Sundarban	February 25-27, 2014	Dr. R.K.Trivedi, Professor
Fish Farmers training on Climate Resilient Aquaculture for Sundarban.	Basanti, Sundarban	February 25-27, 2014	Dr. S.K.Rout, Associate Professor

Department of Fishery Engineering:

Title of Seminar, symposium, workshop, training attended	Venue	Duration	Name of Faculty member with designation
24th ALL INDIA CONGRESS OF ZOOLOGY	Kalyani University Kalyani WB	23-25 Nov, 2013	Dr.N.A.Talwar Reader

Department of Aquatic Environment Health:

Title of Seminar, symposium, workshop, training attended	Venue	Duration	Name of Faculty member with designation
100th Indian Science Congress	Kolkata	3rd -7th January, 2013	Dr Gadadhar Dash
24th All India Congress of Zoology & National Seminar on Biodiversity & its management for food, livelihood & Environmental security	Kalyani University, Kalyani, W.B	23rd -25th Nov.2013	Dr Gadadhar Dash
Orientation Training Workshop on "National Surveillance Programme for Aquatic Animal Diseases"	NBFGR, Lucknow	17th to 20th Sept-2013	Dr Gadadhar Dash
National Consultation on Development of Surveillance Programme for Aquatic Animal Diseases	NBFGR, Lucknow	17th to 18th April-2012	Dr Gadadhar Dash



Title of Seminar, symposium, workshop, training attended	Venue	Duration	Name of Faculty member with designation
Expert Consultation on Academic Partnership for Excellence and Networks	CIFE, Kolkata Centre	23th April -2012	Dr Gadadhar Dash
National Conference on Aquatic Animal Health and Management-2012	Centre of Advanced Study in Marine Biology, Faculty of Marine Sciences, Annamalai University, Parangipettai, Tamil Nadu	14-15 September, 2012	Dr. T. J. Abraham, Professor

Faculty of Dairy Technology:

Department of Dairy Chemistry:

Title of Seminar, symposium, workshop, training attended	Venue	Duration	Name of Faculty member with designation
National seminar organized by Indian Dairy Association (EZ)	Kolkata	7th April, 2012	Dr. P.R.Ray , Dr.P.K.Ghatak and Dr. A.K. Bandyopadhyay
Seminar on Food safety organized by AFSTI (Kolkata) and Dept. of Food Tech and Biochemical Engineering , Jadavpur University	Jadavpur University Kolkata	3rd March, 2012	Dr. P.K.Ghatak
National Seminar on Dairy Education. IDA (EZ)	kolkata	2012	P.R Ray, P.K. Ghatak and A.K. Bandyopadhyaya
19th Weast Bengal Statte Science and Technology Congress	Saha Instiute of Nuclear Physics	(Mrach 1-2, 2013)	A.K.Bandyopadhyay, P.K.Ghatak and P.R.Ray
AICTE sponsoredNational Seminar on "Recent Advances in the Development of Natural Antioxidants"	Guru Nanak Institute of Technology, Sodepur, Kolkata	March 12-13.	P.R.Ray
XXXXI Dairy Industry Conference	Mumba	14-16 March.	P.K.Ghatak and A.K. Bandyopadhyaya
National Seminar on Food Safety Act-2006	Kolkata	August 24,	P.K.Ghatak and A.K. Bandyopadhyay
National Seminar on "Innovations in Dairy Processing in India- Post Operation Flood Scenario".	Faculty of Dairy Technology, WBUAFS, Mohanpur	14-15th March, 2014	P.R.Ray and P.K.Ghatak



Department of Dairy Microbiology:

Title of Seminar, symposium, workshop, training attended	Venue	Duration	Name of Faculty member with designation
Recent Advances in the Development of Natural Antioxidants	Dept. of FT,GNIT, Kolkata	12-13th March, 2013	Dr. T. K. Maity
Sustainable Development through Innovative Research in Science and Technology	Jadavpur University Campus, Kolkata.	28-29th September, 2012	Dr. T. K. Maity
Recent Advances in the Development of Natural Antioxidants	Dept. of FT,GNIT, Kolkata	12-13th March, 2013	Dr. T. K. Maity
National Seminar on Biotechnology for Sustainable Development	Heritage Institute of Technology, Kolkata	23-24 February, 2012	Dr. T. K. Maity
National Seminar on Food Safety- role of standards	IIP, Kolkata	10th June, 2012	Dr. T. K. Maity
Sports Medicine & Sports Science in Sports – From Induction to Excellence	KIIT Campus, Bhubaneswar	27th & 28th April 2013	Dr. T. K. Maity
Testing & Evaluation of packaging materials and packages	IIP, Kolkata	2nd July, 2013	Dr. T. K. Maity
Biodiversity and its Management for Food, Livelihood & Environmental security	Department of Zoology University of Kalyani Kalyani	November 23-25 2013	Dr. T. K. Maity Dr. S.P. Sarkar
Food safety act 2006 and its benefits to Dairy sectors	Indian Dairy association (East zone), West Bengal State Veterinary Council Bhavan, Kolkata	24th August 2013	Dr. T. K. Maity Dr. S. P. Sarkar
Trends in Packaging of processed foods	IIP, Kolkata	13th December, Kolkata	Dr. T. K. Maity
Innovations in Dairy Processing in India – Post Operation Flood Scenario'	Faculty of Dairy Technology, WBUAFS, Mohanpur	March 14 –15, 2014	Dr. T. K. Maity Dr. S. P. Sarkar
Development of e-course for B. Tech (Dairy Technology) Degree Programme	Sanjay Gandhi Institute of Dairy Technology, Patna	5th September, 2013	Dr. T. K. Maity
National Seminar on 'Dairy Development in Eastern India – Constraints and Remedies', Organized by Indian Dairy Association (East Zone)	Institute of Engineers', West Bengal State Centre, Kolkata	April 7, 2012	Prof.D.C.Sen, Prof. M.K.Sanyal, Prof.S.C.Pal and Prof. S.K. Gangopadhyay
Seminar on 'Dairying in West Bengal: Public Health Concern and Challenges', 12th Re-Union, Past & Present Dairy Students, BCKV and WBUAFS	West Bengal University of Animal & Fishery Sciences, Mohanpur, Nadia, West Bengal	December 24, 2012	Prof.D.C.Sen, Prof. M.K.Sanyal, Prof.S.C.Pal and Prof. S.K. Gangopadhyay



Title of Seminar, symposium, workshop, training attended	Venue	Duration	Name of Faculty member with designation
National Workshop on 'Revamping Education and Research in Dairy Processing to Meet Global Challenges', Organized by KVASU, Kerala	College of Dairy Science and Technology, Thrissur, Kerala	September 27-28, 2012	Prof. M.K. Sanyal and Prof. S.P.Sarkar
National Seminar on 'Recent Advances in the Development of Natural Antioxidants', Organized by The Guru Nanak Institute of Technology (GNIT) and All India Council for Technical Education (AICTE)	GNIT, Sodepur, Kolkata – 700 114	March 12–13, 2013	Prof. M.K.Sanyal and Dr. P.R.Ray
10th All India Conference on 'One World – One Health: Emerging Veterinary Public Health Challenges and Strategies' Organized by The Association of Public Health Veterinarians, West Bengal Chapter	WBUAFS, Kolkata	December 14-15, 2012	Prof. M.K.Sanyal
Interactive Workshop of NAIP Project (Component-I Sub-project) on 'Development of e-courses for B.Tech. (Dairy Technology) degree programme'	NDRI, Karnal	January 31, 2013	Prof. M.K.Sanyal
10th All-India Conference and National Symposium on 'One World – One Health: Emerging veterinary public health challenges and strategies' Organized by Association of Public Health Veterinarians	West Bengal university of Animal & Fishery Sciences, Kolkata	December 14 –15, 2012	Prof. M.K.Sanyal
National Seminar on 'Recent advances in the development of natural antioxidants', Organized by The Guru Nanak Institute of Technology (GNIT) and All India Council for Technical Education (AICTE)	Guru Nanak Institute of Technology, Sodepur, Kolkata,	March 12 – 13, 2013, P 20 – 23	Prof. M. K. Sanyal
National Seminar on Dairying in Eastern India : Challenges & Opportunities. Organized by Indian Dairy Association (East Zone) Bihar State Chapter	Hotel Mourya, Patna,	15 & 16 April, 2012	Prof. D.C. Sen
National Seminar on Food Safety, Sponsored by UGC	Prabhat Kumar College, Contai, West Bengal	August 7 and 8, 2013	Prof. D. C. Sen
National Seminar on Food Safety Act – 2006 and its Benefit to the Dairy Sector, Organized by IDA	Indian Dairy Association (East Zone), Kolkata.	August 24, 2013	Prof. D. C. Sen
Review Workshop of NAIP Project (Component-I Sub-project) on 'Development of e-courses for B.Tech. (Dairy Technology) degree programme'	NDRI, Karnal	January 08, 2014	Prof. M.K.Sanyal

**DREF:**

Title of Seminar, symposium, workshop, training attended	Venue	Duration	Name of Faculty member with designation
Workshop on Baselines and indicators for demonstration projects on Climate Change adaptation in rural areas of India	New Delhi	2 days 13-14 June, 2012	Dr. B K Chand, Farm Manager
Workshop on "Systematization Orientation" of Pilot Project on Climate Adaptation through Enhanced Food Production in Indian Sundarbans	Bakhali, Sundarban	2 days 5-6 February, 2013	Dr. B K Chand, Farm Manager
Workshop on Systematization for demonstration projects on Climate Change adaptation in rural areas of India	Kolkata	2 days 08-09 April, 2013	Dr. B K Chand, Farm Manager
Training on Ecosystem-based Adaptation to Climate Change (Organised by GIZ, Germany)	Kolkata	3 days 11-13 April, 2013	Dr. B K Chand, Farm Manager
Knowledge sharing workshop on Agriculture and livelihood in the Sundarbans: Practice, Technology and Policy.	Kolkata	1 day 6 May, 2013	Dr. B K Chand, Farm Manager
2nd Annual Workshop of National Initiative on Climate Resilient Agriculture (NICRA)	New Delhi	3 days 17-19 June, 2013	Dr. B K Chand, Farm Manager
Workshop on "Systematization of Experiences" of Pilot Project on Climate Adaptation through Enhanced Food Production in Indian Sundarbans	Bakhali, Sundarban	9 days 29 Sept.-7 Oct., 2013	Dr. B K Chand, Farm Manager
Review Workshop on sharing of results and learning on Adaptation to Climate Change in West Bengal	Kolkata	1 day 8 October,	Dr. B K Chand, Farm Manager
Workshop on Policy Dialogue for Sustainable Agriculture and livelihood in Sundarban	Kolkata	1 day 18 January, 2014	Dr. B K Chand, Farm Manager
Review Workshop on Demonstration Project-Climate Adaptation through enhanced food production in Indian Sundarbans.	Kolkata	1 day 27 January, 2014	Dr. B K Chand, Farm Manager
National Seminar on Impact of Climate Change on Aquaculture and Mitigation options for Food Security	Kalyani	2 days 25-26 March, 2014	Dr. B K Chand, Farm Manager

OFFICERS:

Title of Seminar, symposium, workshop, training attended	Venue	Duration	Name of Faculty member with designation
National Seminar on "Reforms in Higher Education Administration: Issue, Challenges & Planning"	Digha, East Midnapore	3 days 15-17 March, 2013	Dr. Pankaj Kumar Biswas, Deputy Registrar
Installation-cum-Training Workshop for Nodal Officers under NAIP project "Strengthening Statistical Computing for NARS"	Directorate of Water Management, Bhubaneswar	2 days 5-6 September, 2013	Dr. Pankaj Kumar Biswas, Deputy Registrar
National Seminar on "Higher Education in the Era of Privatization: Problems and Prospects"	University of Burdwan	2 days 10-11 January, 2014	Dr. Pankaj Kumar Biswas, Deputy Registrar

11
HONOURS / AWARDS :

Details of honours/awards received by the teachers, scientists & officers during the period:

Faculty of Veterinary & Animal Sciences:
Department of Veterinary Public Health:

Sl. No.	Name of the recipient	Name of the Award/ honour	Awarding body	Purpose of award
1	Dr. C. Debnath	Best paper award	APHV	Dermatophytosis in dogs.

Department of Veterinary & Animal Husbandry Extension Education:

Sl. No.	Name of the recipient	Name of the Award/ honour	Awarding body	Purpose of award
1	Prof. A. Goswami	Fellow of the Association of Public Health Veterinarians (FAPHV) 2013		

Department of Teaching Veterinary Clinical Complex:

Sl. No.	Name of the recipient	Name of the Award/ honour	Awarding body	Purpose of award
1	Dr. S. Chaudhuri	Best oral presentation award 2014	Indian Society for veterinary Medicine	Ethno-veterinary Medicine

Department of Veterinary Pathology:

Sl. No.	Name of the recipient	Name of the Award/ honour	Awarding body	Purpose of award
1	Dr. S.K. Mukhopadhyay,	Zonal Secretary Eastern Region 2013	Indian Association of Veterinary Pathologists	Vety. Pathology
2	Dr. S.K. Mukhopadhyay	Member of editorial board 2013	Indian Journal of Veterinary Pathology, Livestock line, Poultry line and Indian Pet journal of Livestock Research	Vety. Pathology
3	Dr. S.K. Mukhopadhyay	IAVP-achievement award -2013	Indian Association of Veterinary Pathologists	Best farm animal pathologist.



Department of Veterinary Microbiology:

Sl. No.	Name of the recipient	Name of the Award/ honour	Awarding body	Purpose of award
1	Dr. S. N. Joardar	Dr. C. M. Singh Best Research Paper Award 2012	Indian Journal of Comparative Microbiology, Immunology and Infectious Diseases	Best Research paper published in CMIID
2	Dr. S. N. Joardar	Award of Excellence 2012	19th WB State Science and Technology Congress, org. by DST, Govt. of W.B.	Animal and Fishery Science Section'
3	Dr. S. N. Joardar	Award of Excellence 2013	20th WB State Science and Technology Congress, org. by DST, Govt. of W.B.	Health Science Section'
4	Dr. S. N. Joardar	Award of Excellence 2014	21st WB State Science and Technology Congress, org. by DST, Govt. of W.B.	Veterinary Science Section'
5	Dr. Indranil Samanta	National Academy of Agricultural Sciences (NAAS) Associate 2013		
6	Dr. Indranil Samanta	Best paper presentation award 2013	20th WB State Science and Technology Congress, org. by DST, Govt. of W.B.	Award for excellence

Department of Instructional Livestock Farm Complex:

Sl. No.	Name of the recipient	Name of the Award/ honour	Awarding body	Purpose of award
1	Dr. Aruna Pal	Best Poster Award- International Conference 2014	Indian Society for the Study of Reproduction and Fertility	Reproductive Health: Issues & Strategies under Changing Climate Scenario"

Department of Veterinary Biochemistry:

Sl. No.	Name of the recipient	Name of the Award/ honour	Awarding body	Purpose of award
1	Dr. S. Batabyal	Fellow of Society of Applied Biotechnology (F.S.A.B)	Society of Applied Biotechnology, 1/115, Puliur, Krishnagiri, Tamil Nadu, India	Animal Biochemistry and Biotechnology

**Department of Veterinary Epidemiology & Preventive Medicine:**

Sl. No.	Name of the recipient	Name of the Award/ honour	Awarding body	Purpose of award
1	Prof. Chanchal Guha	Felicitated by "Bangaon Society for Human and Animal Resource Welfare 2012	"Bangaon Society for Human and Animal Resource Welfare	social activity with poor farmers for the welfare of their livelihood and wellbeing
2	Prof. Chanchal Guha	Fellow of Association of Public Health Veterinarians-2012	Association of Public Health Veterinarians	
3	Dr. Ujjwal Biswas	National Education Leadership Award 2012	EGSI	Reorganization of Sterling Merit Excellent performance and outstanding contribution for the progress of the nation and world wide.
4	Dr. Ujjwal	Global Education Leadership Award 2012	EGSI	Reorganization of Sterling Merit Excellent performance and outstanding contribution for the progress of the nation and world wide.
5	Dr. Ujjwal Biswas	Outstanding Career Development Award for Education Excellence 2012	IOBRD	Outstanding contribution and Lifetime achievement in their respective field.
6	Dr. Partha Sarathi Jana	Best paper presentation Award 2013	Department of Veterinary Medicine, College of Vety. Sc. and Animal Husbandry, Mhow, NDVSU, Jabalpur, M.P.	Avian Disease session in the "National Symposium on "Advancing Veterinary Medicine and its Specialities for Augmented Productivity and Health: Issues and Strategies in Farm and Companion Animals"
7	Dr. Ujjwal Biswas	Noble India Award 2013	EGSI	Outstanding contribution and life time achievement in their respective field
8	Dr. Ujjwal Biswas	Rashtriya Shiksha Ratan Award 2013	IOBRD	Outstanding contribution and life time achievement in their respective field

Department of Animal Nutrition:

Sl. No.	Name of the recipient	Name of the Award/ honour	Awarding body	Purpose of award
1	Dr A.K. Patra	Selected as 'Associates' 2014	National Academy of Agricultural Science	
2	Dr. G.P. Mandal	Best paper presentation (oral)	2nd National IAVNAW conference. Jammu	
3	Dr. Paresh Nath Chatterjee	Selected as 'Executive Body Member' 2013	Animal Nutrition Association (H.Q. IVRI, Izatnagar)	



Department of Veterinary Surgery & Radiology:

Sl. No.	Name of the recipient	Name of the Award/ honour	Awarding body	Purpose of award
1	Shyamal Kanti Guha	Poster presentation award 2013	100 th Indian science Congress	Establishment of iPS cells and embryonic stem cells in goat
2	Shyamal Kanti Guha	Oral presentation in National conference 2013	XXXVII Annual Congress of Indian Society for Veterinary Surgery in Trissur, Kerala.	Need for specialization and superspecialization in veterinary surgery and imaging techniques for professional efficiency development in Orthopaedic Surgery Session
3	Shyamal Kanti Guha	Oral presentation Award 2012	XXXV Annual Congress of Indian Society for Veterinary Surgery	Orthopaedic Surgery
4	Shyamal Kanti Guha	Oral presentation Award 2014 in 2 nd Pharma Tech IAPST International Conference	Department of Pharmaceutical Technology, JU, Indian Association of Pharmaceutical Scientists & Technologists and NSHM knowledge campus	New insights into diseases and recent therapeutic approaches
5	Dr. S. Hazra	Award for excellence. Poster presentation 2013	West Bengal DST Science congress	Evaluation of Silver Nanoparticles for post surgical wound healing.
6	Dr. A. Maji	ISACP AWARD-2012	Indian Society for Advancement of Canine Practice	Poster Presentation, consolation), Bikaner
7	Samit Kumar Nandi	Biotech Product and process development and commercialization award 2013	Department of Biotechnology, Ministry of Science & Technology, Government of India, New Delhi	
8	Samit Kumar Nandi	National Bioscience Award 2008 for Career Development 2013	Department of Biotechnology, Ministry of Science and Technology, Government of India	
9	Samit Kumar Nandi	SAB Award for "Excellence in Animal Biotechnology	Society of Applied Biotechnology, India	Animal Biotechnology
10	Samit Kumar Nandi	Appreciation Award in Orthopaedic Surgery Session for paper presentation by XXXV Annual Congress 2013	Indian Society for Veterinary Surgery	Orthopaedic Surgery
11	Samit Kumar Nandi	Adjunct Faculty 2012	School of Mechanical and Materials Engineering, Washington State University, Pullman, USA	
12	Samit Kumar Nandi	Oral presentation Award in 2 nd Pharma Tech IAPST International Conference	Department of Pharmaceutical Technology, JU, Indian Association of Pharmaceutical Scientists & Technologists and NSHM knowledge campus	New insights into diseases and recent therapeutic approaches

**Department of Livestock Production Management:**

Sl. No.	Name of the recipient	Name of the Award/ honour	Awarding body	Purpose of award
1	Prof. S.Pan	Juthika Chakrabarty Memorial Award.2013	—	—
2	Prof. R.Samanta	National Fellow of ISAPM 2013		

Department of Veterinary Pharmacology & Toxicology:

Sl. No.	Name of the recipient	Name of the Award/ honour	Awarding body	Purpose of award
1	Dr. T.K. Sar	International Travel grant award 2013	DBT, Govt. of India	

Department of Anatomy & Histology:

Sl. No.	Name of the recipient	Name of the Award/ honour	Awarding body	Purpose of award
1	Dr Partha Das	Post Doctoral Fellowship 2012-2013	—	—

Department of Veterinary Physiology:

Sl. No.	Name of the recipient	Name of the Award/ honour	Awarding body	Purpose of award
1	Dr. Pradip Kumar Das		Society of Animal Physiologists of India	Animal Physiology

Faculty of Fishery Sciences:**Department of Aquatic Animal Health:**

Sl. No.	Name of the recipient	Name of the Award/ honour	Awarding body	Purpose of award
1	Chitra Pakhira, T.S.Nagesh, T.J.Abraham, G.Dash, and S.Behera	Best Poster Presentation Award (Gold Medal) 2013.	ZSI	Stress response in Rohu, <i>L. rohita</i> (Hamilton,1822) transported at different densities



Faculty of Dairy Technology:

Department of Dairy Chemistry:

Sl. No.	Name of the recipient	Name of the Award/ honour	Awarding body	Purpose of award
1	P.R.Ray, P.K.Ghatak, S.Maji and A.K. Bandyopadhyay	Third Best Poster award for Presenting Poster 2014	Faculty Of Dairy Technology, West Bengal University of Animal and Fishery Sciences, Mohanpur, Nadia	Rheological characteristics of Cow Milk Pancer treated with Banana Pseudostem Juice"

Department of Dairy Technology:

Sl. No.	Name of the recipient	Name of the Award/ honour	Awarding body	Purpose of award
1	Prof. M.K.Sanyal	Fellow of the National Academy of Dairy Science (India) 2014		

Directorate of Research, Extension & Farms:

Sl. No.	Name of the recipient	Name of the Award/ honour	Awarding body	Purpose of award
1	Dr. B K Chand, DREF	Netherlands Government Fellowship 2013	NUFFIC	International Training on Integrated Water Resources Management

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CENTRAL LIBRARY & INFORMATION NETWORK SERVICES (CLINS) :

INFORMATION OF LIBRARIES: WBUAFS

In the University, the research, Communication and information always go together and only the improved methods of transmission of information can produce meaningful research. This is more true in regards to Veterinary, Fishery and Dairy Sciences.

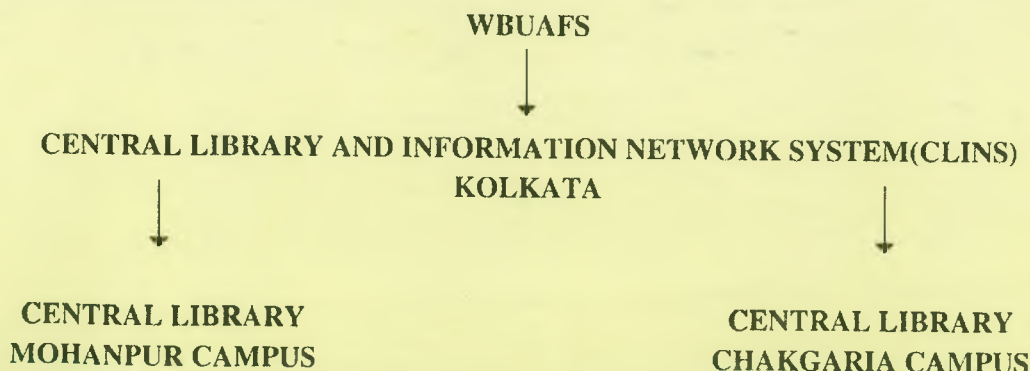
The creation of this University in the year 1995 after bifurcation of Bidhan Chandra Krishi Viswavidyalaya(BCKV),every academic mind of this University has the intension to develop its own Central Library to keep pace with the time. Therefore, this University established the Central Library and Information Network Service (CLINS) at its Head quarter campus at kolkata by utilizing some ICAR fund and started functioning with the books, journals and 1ther materials, transferred from BCKV.However ,this Central Library is also maintaining another two set-up at Mohanpur (Haringhata) and Chakgaria Campuses of this University.Subsequently this new library improved the collection with regards to books and journal out of some funds which were available from ICAR and State Governments.

The accommodation as a total floor space of about 10000 sq. ft. in two storied building at kolkata campus for it's various activities with the financial assistance from ICAR catch-up-grand.

To develop the library at Kolkata campus as mandated by the ICAR (NATP), some grants were released during the period from 1999-2000 to 2003-04, under the project **"Strengthening of Library information system"**as well as **ICAR Development Grant**, we undertook the various developmental works specially electronic services (Library automation) for the benefits of the students scholars and academicians of the University.

ORGANIZATIONAL STRUCTURE OF THE CLINS:

Out of three faculties of this University, the faculty of Veterinary and Animal Sciences is located at the main (Kolkata) campus were the main Central Library is situated. Therefore we have established all the NATP schedules in Kolkata Campus at the first opportunity. Other two faculties are situated at 45 km. away from the main campus where the two separate off-campus small Libraries (One for Dairy Technology Faculty at Mohanpur and other for Fishery Faculty, at Chakgaria are functioning under the control of CLINS).





EXISTING STAFF PATTERN OF THE CLINS:

At present total 18 persons are working in different campuses are as follows:

Designation	No. of post	Remarks
Librarian	1 (One)	Vacant
Deputy Librarian	1 (One)	
Assistant Librarian	1 (One)	-
Jr. Library Assistant	6 (Six)	Vacant
Jr. Assistant	3 (Three))	-
Supporting worker (Un-skilled)	13 (Three)	-

LIBRARY HOURS:

Kolkata Campus:

Monday to Friday: 10 am to 7 pm

Mohanpur & Chakgaria Campus:

Monday to Friday: 10 am to 5.30 pm

On working days the services of the following sections of the Central Library (Kolkata) will remain open, as below:

a. Reading Room	10 am to 7 pm
b. Reference Section	10 am to 7 pm
c. Journal and Career Guidance	10 am to 7 pm
d. Internet Section	10 am to 7pm
e. Lending Section	11 am to 4.30 pm
f. Photocopying Service	11 am to 5.30 pm
h. Membership Section	11 am to 5.30 pm
j. Library Office	10 am to 5.30 pm on weekdays

CLINS Users:

- ✓ FACULTY MEMBERS: FACULTY OF VAS / DT/ F SC.
- ✓ PH D. SCHOLARS: FACULTY OF VAS / DT.
- ✓ P.G. STUDENTS: M.V.SC., M.TECH., M.F.SC.
- ✓ U.G. STUDENTS: B.V.SC. & A.H., B. TECH (DT), B.F.SC.
- ✓ OTHERS: PRIOR PERMISSION



Library Holding:

- ✓ Databases of Total Number of Books 19636 upto April 2011 (Computerized)
- ✓ Veterinary Science: 12970 Dairy Science: 7020, Fishery Science: 2010
- ✓ Databases of Total number of volumes of Journals (Computerized): 6000
- ✓ Total number of current Journals:
- ✓ Foreign Journals: 27
- ✓ Indian Journals: 23
- ✓ Databases Total number of annual reports, pamphlets, bulletin, indexes and research highlights and news letter: 1500
- ✓ Total number of thesis / Dissertation including Ph.D (fully digitized): 1500
- ✓ Total number of records in data base 30000
- ✓ No. of books issued to the users (per day) 125(average)
- ✓ No of books returned (per day) : 90(average)
- ✓ Reference consultants(per day) : 150(average)
- ✓ No. of Books issued per day: 125 nos.
- ✓ No. of Books return per day: 90 nos.
- ✓ Reference consultants per day: 150 nos

Services:

- ✓ Internet Browsing privileges to the users: Extended to Post graduate and Research level users with 1 GB (through lease line)
- ✓ 1 Gbps bandwidth(Point to point) from NME-ICT Project for internet Browsing.
- ✓ Online Abstracting Services: Extended to Post graduate and Research level users
- ✓ CD ROM
- ✓ CAS
- ✓ Photocopying services(Private agency)
- ✓ Information Services file
- ✓ Resource Sharing
- ✓ Services to career guidance tools
- ✓ Wi-fi service
- ✓ Information Hub
- ✓ University Bookshop
- ✓ On line journals (under CeRA)



- Elsevier – 358 Journals
- Taylor & Francis – 1079
- Indian Journals Com – 131
- Annual Review Inc. – 22
- CSRIa – 8
- Springer Verlag – 70
- Informatics - 3327

Status of Library Automation:

The CLINS has been taking the appropriate steps to computerize the library's housekeeping operations. The work related to retrospective conversion of library collection is in progress in the form of bibliographical / catalogue from including digitations of Theses by WINISIS 5.0 version. But as per recommendation of the NATP meeting held on 16/8/03 at Hyderabad, these work has to be converted again to SOUL software for automation and Bar Coding of all the library accessions.

1. Computerization of Catalogue: YES
2. Total No. records in the Data Base: 32000
3. How many books : Number Completed: 22000
Total No. of Books in the Library: 22000
4. How many journals: Number Completed: 6000 (Back volume)
Total No. of Journals in the Library: International: 27
National: 23 continued
5. Online catalogue available : YES
6. Circulation fully automated : YES
7. Theses abstracts digitized fully: YES
8. Number of theses abstracted digitized: 1500
9. Digitized abstracts integrated with Library server: YES

Resource Management (CLINS):

The Internet Centre was established in the year of 2001 at Mohanpur Campus. This was inaugurated by Dr. B.B. Mallick, the then Vice-chancellor of this University. Further in 2002 with the Financial help of the NATP (ICAR), New Delhi, the Central Library & Information Network Service at Kolkata campus along with LAN Facility was inaugurated by the Hon'ble Sri Budhabed Bhattacharjee, Chief Minister of West Bengal in the presence of Hon'ble Sri Anisur Rahaman, Minister-in-Charge, ARD, Hon'ble Sri Kironmoy Nanda, Minister-in-Charge, Department of Fishery and our Hon'ble Vice-Chancellor Dr. A.K. Bhattacharya on 12th August 2002. The CLINS has also



been introduces the Audio Visual facility. A room for the purpose was inaugurated by Dr. G.C. Tewari, ADG(EDP) ICAR in presence of our Hon'ble Vice-chancellor Prof. C.S. Chakrabarti on 20th May 2009.

At the CLINS, there are 80 nodes are connected under LAN at Kolkata campus, 20 nodes at Mohanpur and 25 nodes at Chakgaria Campus. So that the teachers, scholars, students, officers and staffs of the University can access to this centralized facility.

Internet connectivity:

The CLINS is also providing the Internet facility on round the clock basis to all users in the university including teaching, administrative staff and research scholars, students. The internet facility is being provided through a 1 GBPS point-to-point internet connectivity under *NME-ICT Project* for Kolkata campus and 1Mbps Broadband line (BSNL) for Mohanpur and Chakgaria Campus.

Website Development/Maintenance:

The University website maintained and developed under the supervision of the In-charge, CLINS.

CLINS is giving the following services:

1. Providing Central Computing facility to all users of the University.
2. University Website development & maintenance.
3. Management of University campus LAN with Internet and intranet.
4. Monitoring and uploading the University website.
5. Developing and maintaining comprehensive MIS system of our University.
6. E-mail facility and Internet accessibility.
7. Providing Digitization of Library documents including thesis.
8. Providing Internet facility for academic/research purpose to our students, research scholars, and teachers and staffs.

Digital EPABX:

CLINS is a university switching station for management of campus area telephone network.

Digital EPABX System Cabinet wired for 64 ports

- ✓ 08 Digital Extension ports
- ✓ 64 Analogue extension ports
- ✓ 16 Analogue Co/Trunk Ports
- ✓ 01 Operator Console
- ✓ MDF with IPM protection in all lines

Resource Generation:

Year	Category				
2002-03	7973.50	3832.00	955.70	6000.00	-
2003-04		734.00	891.00	-	-
2004-05	-	946.00	2211.00	-	-
2005-06	-	568.00	2913.00	700.00	-
2006-07	-	1037.00	1236.00	-	-
2007-08	-	2112.00	454.00	10600.00	-
2008-09	-	306.00	427.00	4900.00	-
2009-10	-	5263.00	65.00	4400.00	-
2010-11	-	8022.00	-	1700.00	-
2011-12	-	3366.00	-	-	-
2012-13	-	2699.00	-	-	-
2013-14	(upto 8/2013	2901.00	-	-	-

Hardware/Software Resources of CLINS:

Database Application Server	IBM 205 3 nos
E Mail Server/DNS Server	HIP DL380
Operating Systems	Windows 2003 Server, Windows XP Visual studio, MSOffice 2007, SOUL, CLINS
Switches	D-LINK 24 Port Managed Switch- 8nos
Firewall cum UTM	Juniper SSG 5
Online UPS	Emerson 2 KVA
Desktops/Laptop/Printers/Scanner	Desktop: 15 nos P-IV 3 5Gz, Printer: - HP LaserJet 1000, HP LaserJet -1050, HP Color LaserJet 2600n, HP DeskJet 5100, 3048, HP All-in-One 380 Scanner: -HP 3670

Impact of the NATP and ICAR Development Grant:

The Library of a modern Institute is now a days is not only a house of knowledge but also a rich source of relevant information in the concerned disciplines. After receiving a steady support from the NATP under LIS and ICAR Development Grant, we undertook the library management with a view for proper functioning of the library for its better.

The efficiency of a library which depends on use pattern, electronic abstracting services and library management system have been improved both on qualitative and quantitative basis in this University.



At West Bengal University of Animal and Fishery Sciences in three campuses, LAN facilities were commissioned in the year 2002 which was initiated by the NATP. This project with commissioning of 256 kbps leased line through ERNET is now improved upto 2 Mbps in a position to expand the electronic connectivity down to divisional level with all SAUs and ICAR Institutes and provide Institutes access to worldwide web. Using this enhanced connectivity with the support of ICAR improved on-line access by our Scientists, Scholars and students to a) international databases and scientific literature held centrally within the country through CeRA b) external databases accessible through worldwide.

The foreign journals (average 25 nos.) see (Annex-I) subscribed from NATP funds for four years continuously(2002-2005) and after words these were continued under ICAR Development Grant from the year 2006 to 2009 UNDER 3.1 OF I which is helping the scientists to access the nacent information in their respective field. But now the Central Library gets the fund under Library Stengthening of ICAR .

The excess to web of science facility provided by IARI, New Delhi helped scientists in accessing world literature for research and teaching.

The NATP funding helped the 'Library Automation" library software SOUL from Infflibnet was purchased and library automation services are going on by providing outsourcing due to non-availability of technical persons. It helped the readers to access the information through OPAC and save their valueable time hither to spend on manual searching .The library automation also provides the following day-to-day services for proper utilization.

- Eledctronic circulation control system
- Barcoding of all library documents.
- Electronic ID Cards for library users and University's staff also.
- Electronic circulation of theses viewer.
- Refrence service.

The training programmes was organized by ICAR-INFLIBNET for Agricultural Librarians on Networking / SOUL/e-Resource Management really helped the library professionals in updating their knowledge in IT field. This training boosted the morale of the professionals and helped them to come out of their own traditional net to modern world.

The trained library professionals in turn gave training to the students ,researchers and faculty members of the University in accessing of Web of Science ,e-Resource, CD ROM and networking.

The ICAR Developments also made for improving resources for the libraries in terms of procuring books/ journals/computers etc under the head of A/C 3.1 &2 upto the financial 2008 – 2009. After words only book grant and ERNET Grant is received.

To sum up, the NATP funding for improvement of libraries made the historical achievement in creating a new IT era among the Agricultural Libraries of SAUs.

The Central Library expect much more facilities to be introduced depending upon the release of grant from ICAR.



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DISTINGUISHED VISITORS IN THE UNIVERSITY :

1. Shri M. K. Narayanan, His Excellency the Governor of West Bengal & Chancellor of West Bengal University of Animal & Fishery Sciences on 8th Convocation, July 18, 2013
2. Prof. Avijit Sen, Member, Planning Commission, Government of India on 8th Convocation, July, 2013.
3. Shri Swapan Debnath, Hon'ble Minister-in-Charge, ARD Deptt., Government of West Bengal.
4. Sri Chandranath Sinha, Hon'ble Minister-in-Charge, Department of Fisheries, Govt. W.B.
5. Dr. S. Ayyappan, Secretary Department of Agricultural Research & Education and Director General, ICAR, Govt. of India. New Delhi.
6. Janab Nura Alam Chowdhury, Ex-Hon'ble Minister-In-charge, Deptt. of ARD, Govt. of West Bengal.
7. Jenab Abu Hena, Ex-Hon'ble Minister-In-charge, Deptt. of Fishery, Aquaculture, Aquatic Resource and Fishery Harbour and Deptt of Food Processing Industry & Horticulture, Govt. of West Bengal
8. Lt. General (Dr.) Narayan Mohanti, the Director General of Remount Veterinary Service and recipient of Param Vishisht Seva Medal (PVSM), Ati Vishisht Seva Medal (AVSM), Vishisht Seva Medal (VSM) & President of VCI
9. Prof. Vijoy Kumar Chakraborty, Ex-Director, National Dairy Development Board, (Eastern Region).
10. Dr. S.V. Inglee, Veterinary Council of India.
11. Dr. J.k. Jena, Director, NFGR, Lucknow, Uttar Pradesh
12. Dr. S.K.Bandyopadhyay, Hon'ble Member, Agricultural Scientists' Recruitment Board, New Delhi.
13. Dr. A.K.Srivastava, Hon'ble Director and Vice-Chancellor, National Dairy Research Institute, Karnal.
14. Sri Paras Dutta, Hon'ble Chairman, West Bengal Cooperative milk Producers' Federation Ltd., W.B.
15. Dr. G.R.Patil, Joint Director (Academic), NDRI, Karnal.
16. Dr. P.R.S.Moorthy, Dean, College of Dairy Science, Sri Venkateswara Veterinary University, Tirupati.
17. Dr. S. Kulkarni, Station-in-Charge, Southern Regional Station, NDRI, Bengaluru.
18. Dr. R.K.Malik, Head, DM Division, NDRI, Karnal.

PARTICIPATION OF VICE CHANCELLOR TO IMPORTANT PROGRAMMES :

Vice Chancellor attended conference, seminar, symposium, meeting etc. during the period of April'2012 to March'2014.

Sl No.	Date	Place	Programme
1	26.04.2012	Srinagar Sher-e-Kashmir University	Attended the V.C's meeting organized by IAUA.
2	13.05.2012	New Delhi	Attended the meeting called by the Director General, ICAR.
3	18.07.2012	Hyderabad	Attended the XXI meeting of ICAR Regional Committee.
4	07.08.2012	New Delhi	Attended the meeting with the ICAR.
5	20.08.2012	Delhi	Attended the knowledge Meet with the V.C's of CAU/SAU pose NASC Complex.
6	27.08.2012	Ranchi	Attended the AIU East Zone V.C's Conference at Central University Jharkhand, Ranchi.
7	27.09.2012	Delhi	Programme from 28.09.2012 to 02.10.2012. To attended the various meeting with the officials of ICAR.
8	08.11.2012	Delhi	Attended the meeting of the IAUA.
9	26.12.2012	Jaipur	Attended the V.C's Convention of AIU.
10	18.02.2013	Delhi	Attended the V.C's Conference of ICAR.
11	13.06.2013	Guwahati	Attended the Selection Committee of AAU.
12	20.06.2013	Chennai	Attended the Selection Committee TVASU.
13	08.12.2013	Bolpur	Attended the Youth Conference.
14	18.12.2013	Ranchi	Attended the conference of IAUA.
15	17.01.2014	Pune	Attended the Annual Conference of V.C's of the State Agricultural Universities.
16	23.01.2014	Delhi	Attended the Meeting convened.
17	31.01.2014	Bolpur	Attended the Inaugural Programme.
18	12.02.2014	New Delhi	Attended the Governing Council meeting of AIU.
19	24.02.2014	Bhubaneswar	Attended the Annual Meeting of AIU.
20	02.03.2014	Bagdogra	Attended the Scientific Advisory Committee Meeting at KVK, Ramshai.
21	23.04.2014	New Delhi	Attended the 324th Governing Council Meeting of AIU.



Financial solvency constitutes one of the key factors for optimum development and growth of an academic and research intuition. The university is primarily financed by the state government through allocation of funds in the Non-Plan head for meeting the salaries and allowances of the employees and other establishment costs of the university. State government also releases Plan funds for undertaking infrastructure development and contribution of state's share to the Central fund for different projects. The finance out of the university's internal resources is and has been very meager. However, major development in the infrastructure and education fronts has been due to the allocation by the ICAR in the form of Specific Grant and Development Grant.

A major financial contribution to the development of the research and extension infrastructure has been from the external agencies funding the research projects in the university. The present number of on-going research projects in the university is thirty-seven (37).

Fund received during the financial years 2012-13 & 2013-14 (Rupees in Lakhs)

Name of Funding agency	2012-13		2013-14	
	Non-Plan	Plan	Non-Plan	Plan
1. State Govt.	2588.11	-	2622.36	181.92
2. ICAR Dev. Grant	-	348.78	-	526.95
3. ICAR & other agencies for dif. Projects	-	511.62	-	482.02
Total	2 588.11	860.40	2622.36	1190.89

Resource generation during the financial years 2012-13 & 2013-14 (Rupees in Lakhs)

Category of sources	2012-13	2013-14
1. Tuition fees	38.22	44.74
2. Consultancy	3.91	8.22
3. Rent	10.43	11.18
4. Bank interest	3.76	1.84
5. Animal sector/ fees	0.61	9.09
6. Farm/ Horticulture/ Forestry	2.70	1.02
7. Misc. receipts	3.90	1.05
Total	63.53	77.14

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SEMINARS / SYMPOSIA / WORKSHOPS / NATIONAL CONFERENCE / CONGRESS / SUMMER SCHOOLS / TRAINING PROGRAMME ORGANIZED :

Details of National Conference / Symposium / Congress / Seminar / Training Programme organized by the department during the period:

Department of Veterinary Public Health:

The department has organized the 10th All India Conference of Association of Public Health Veterinarians and National Symposium on “One World-One Health: Emerging Veterinary Public Health Challenges and Strategies” held on 14th-15th December, 2012.

Department of Veterinary Biochemistry:

Conducted one month Summer Training for B. Tech. (Biotechnology) students on ‘Immunobiochemical Techniques’ in the month of June-July 2012 and 2013.

Department of Animal Nutrition

Seminar conducted by the department:

- i) CLFMA Seminar on employment opportunities for veterinarians
- ii) Panel discussion on ‘Use of Antibiotic Growth Promoter in Food Animals’

Department of Veterinary Physiology

- Conducted zonal level National Veterinary Physiology Quiz and National seminar on “Importance of clinical Physiology in B.V.Sc & AH syllabus and its field importance in collaboration with Society of Animal Physiologists of India and WB veterinary Council on 18th September 2012.
- Conducted National Veterinary Physiology Quiz in collaboration with Society of Animal Physiologists of India on 7th September 2013.
- Conducted Cardiac health camp of trained dogs of Kolkata Police at Police training school, Kolkata.
- Organized 3 days workshop on “Advancement in Physio-Biochemical techniques for assessing of animal health status” in collaboration with W.B. veterinary Council.

Faculty of Dairy Technology:

The Faculty of Dairy Technology organized a National Seminar on ‘*Innovations in Dairy Processing in India – Post Operation Flood Scenario*’ at Mohanpur Campus on March 14 – 15, 2014 to take a stock of the innovations made so far in the discipline of Dairy Processing, facilitate dissemination of the potent ones to the Dairy and Food Industry and also to formulate future strategies. A large number of scientists, teachers, students, entrepreneurs and others associated with the Dairy Processing activities from industry and institutions attended the seminar.

Department of Aquatic Animal Health:

Capacity building of fish farmers and scholars: Ten fish health awareness camp and demonstration programmes were conducted in different parts of West Bengal for the benefit of fish farmers by the Department of Aquatic Animal Health.



Dr. B K Chand attended International training of trainers on IWRM-2013 at Wageningen University, Netherlands.



Dignitaries on the Dias in the 5th Mayor's Conference



Inauguration of Vivek Bhawan (Examination Hall) by Dr. S. Ayyappan



Dr. S. Ayyappan & Vice Chancellor in front of Office of CE



National Seminar at Faculty of Dairy Technology, Mohanpur, Nadia





Students at Central Library, Belgachia, Kolkata



Faculty of Fishery Sciences at Chakgaria, Kolkata

Faculty of Dairy Technology at Mohanpur, Nadia



Celebration of World Fisheries Day with presence of
Sri Chandranath Sinha, Hon'ble Minister-in-charge, Dept. of Fisheries, Govt. of W.B.



IMPORTANT EVENTS, ACTIVITIES AND ACHIEVEMENTS :

Some important events, activities and achievements by this University are furnished herewith:

A. Technical consultancy with National Meat & Poultry Processing Board:

A MOU was signed on 5th October, 2012 between National Meat & Poultry Processing Board (NMPPB), Ministry of Food Processing Industries, Govt. of India and WBUAFS which states the University will provide technical consultancy to the board in all aspects of 'Meat Industry' as and when respected and the University will also prepare research note etc. in the fields of Meat Processing Industry for the board. The University may also design and organize specialized training and other capacity building programmes upon a request.

B. Experimental learning Critical Care Unit:

It has been sanctioned by ICAR which will help in providing critical care facility to the animal with the following objectives:

- Imparting comprehensive hands on training and entrepreneurship development skills in the field of "critical care" to undergraduate and post-graduate students in the discipline of Veterinary Science.
- Dissemination of emerging technologies and facilities in the field of critical care to all the stakeholders viz. working veterinary officers of the state, private practitioners, farmers and students.
- To develop reliable and specific procedures and technologies for diagnosing and treating diseases especially for the critically ill animals.

C. Development of BSL-III category laboratory:

The Department of Veterinary Physiology developed a BSL-III category laboratory with all sophisticated instruments and a well equipped seminar room which is utilized by almost all the departments of faculty of VAS as well as by the other institutions. The Department has a provision for Fifteen days vacation training on "Basic techniques in cell and molecular biology" for science graduates. This department successfully isolated oocyte from bovine ovary for students demonstration.

D. New construction, repair & renovation works at different campuses of the University during 2013-14:

1. Construction of Sports complex with gymnasium is being carried out utilizing an amount of Rs. 31,50,000/- received from ICAR Development Grant.
2. Construction of Critical Care Unit at Belgachia Campus has been completed utilizing an amount of Rs. 68,00,000/- received from ICAR Development Grant.
3. Repairing & renovation of Dog Ward at the cost of 5,78,000/- received from ICAR Development Grant.
4. Construction of a Record Room at the cost of 7,24,000/- received from ICAR Development Grant.
5. Repairing & renovation of the Seminar Room at Belgachia Campus at the cost of 6,00,000/- received from ICAR Development Grant.



6. Repairing & renovation of the Administrative Building at the cost of 9,00,000/- received from ICAR Development Grant.
 7. Repairing & renovation of different Hostels at three campuses of this University at the cost of 28,00,000/- received from ICAR Development Grant.
 8. Development of water supply system at Belgachia Campus of this University at the cost of 5,60,000/- received from ICAR Development Grant.
 9. Construction of Stem Cell Laboratory is being carried out utilizing an amount of Rs. 4,00,000/- received from ICAR Development Grant.
 10. Repairing & renovation of Micro-Biology Laboratory of this University at the cost of 4,20,000/- received from ICAR Development Grant.
 11. Repairing & renovation of the Seminar Room at Mohonpur Campus at the cost of 3,40,000/- received from ICAR Development Grant.
 12. Construction of a store room for the Examination Cell is being carried out utilizing an amount of Rs. 3,70,000/- received from ICAR Development Grant.
 13. Repairing & renovation of Different Departments i.e. Vety. Pathology, Animal Nutrition, Surgery & Radiology, Vety. Parasitology, VAHEE at Belgachia Campus at the cost of Rs. 16,00,000/- received from ICAR Development Grant.
 14. Construction of concrete road & laying interlocking designer paver block for specified area at the cost of 7,00,000/- received from ICAR Development Grant.
 15. Repairing & renovation of Faculty Buildings of Faculty of VAS & DT of this University at the cost of 13,20,000/- received from ICAR Development Grant.
 16. Development of different ponds at at Belgachia and Chakgaria Campus at the cost of Rs. 15.53 lakhs received from ICAR Development Grant.
 17. Boundary wall, fencing etc. at Belgachia Campus at the cost of Rs. 13.44 lakhs received from ICAR Development Grant.
 18. Development of play ground and sports facility for Belgachia and Chakgaria Campus at the cost of Rs. 6.23 lakhs received from ICAR Development Grant.
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