



Director's Desk



Centenary Pillar



Rinderpest Eradication Memorial

Editors

Dr Mahesh Chander
Dr Srikant Ghosh
Dr Rupasi Tiwari
Dr S. K. Bhure
Dr Sophia

Support Team

Shri B K Panwar
Shri P S Jakhwal
Shri Naseem

My warm greetings to all



The livestock sector continues to provide the necessary impetus to the agricultural growth. The sector being less prone to the vagaries of climate change provides necessary economic cushion to the farmers. The increasing demand for livestock products coupled with the growth in income and expanding urban population implies that investment in the livestock sector and technological support to modernize the farming systems should be the priority. Doubling the farmers' income is one among the top priorities for the government and livestock can make it happen, many experts rightly believe.

The institute acts as a national platform in key areas of livestock and poultry health and production. The hard work of the scientific fraternity and students in notable areas viz., vaccines, diagnostics, biologicals, therapeutics, livestock products production and management, stem cell biology, wildlife management and antimicrobial resistance are well appreciated. Recently released 'Landlly'- a pig variety, Subviral particle-based Infectious bursal disease vaccine and Latex agglutination test for direct detection of *Listeria monocytogenes* are among the few notable achievements in last six months.

We facilitated the dialogue and interactions with the farmers and stakeholders in the industry and pursued technology dissemination and commercialization through various platforms and media. Efforts in this direction include organization of animal health camps-cum awareness programme, interface Meets, showcasing of technologies, skill development, *Rashtriya Krishi Unnati Mela and Kisan Mela-cum-Technology demonstration*.

The scientists and students of the institute excelled in various academic activities and earned laurels from national and international establishments through sharing their expertise and getting various awards/fellowships. The research scholars are getting international exposure through sandwich programs. I feel proud in congratulating all the awardees and acknowledge the unceasing efforts, due cooperation of the scientists, staff and students of the institute.

The institute shall continue to strive hard to serve the nation with more commitment, zeal, and hard work to fructify the goals set for sustainable livestock farming and food security needs of the country.

Jai Hind

(R. K. Singh)

Research Headlines...



Improved recombinant N antigen-based, IVRI-M PPRV Antigen capture ELISA kit for PPR detection released

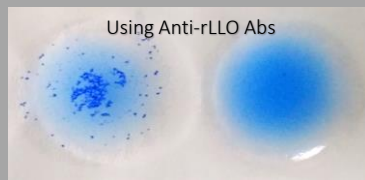


Sub viral particle (SVP) based Infectious bursal disease vaccine developed



New Breed: 'Landlily', a crossbred pig variety for North India developed

A Latex Agglutination Test (LAT) for direct detection of *Listeria monocytogenes* in foods and clinical samples from enrichment broth was developed



Positive Control Negative Control



Positive Control Negative Control

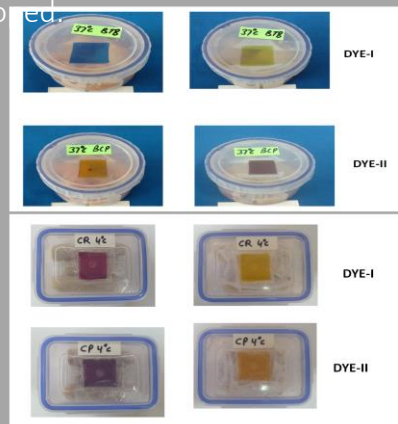
Research Findings...

Absence of an universal quorum sensing signal (QS) in *Clostridium chauvoei*

Dr K.N. Viswas, Principal Scientist, Bacteriology and Mycology division and his team has showed the absence of *luxS* (autoinducer-2), an universal quorum sensing signal, in *C. chauvoei*. The QS is a cell to cell communication system in bacteria used for biofilm formation, secretion of virulence factors, antibiotic production, bioluminescence, sporulation and transfer of genetic material etc.

Dye based meat quality indicators developed

Sensors to assess the freshness, change in quality and temperature abuse conditions of chicken meat stored at different temperatures developed.



Recognitions...



Dr K. P. Singh, Principal Scientist, CADRAD participated in the meeting cum short training of the partners of the Indo-UK / DBT-BBSRC project at School of Veterinary Medicine and Science, The University of Nottingham, U.K.

Dr Mahesh Chander, Head and Acting Joint Director Extension Education, attended 'Launch meeting of EU-project Organic PLUS: Pathways to phase-out contentious inputs from organic agriculture in Europe', as a Member of International Advisory Board.



Dr Putan Singh, Principal Scientist, Animal Nutrition division was recognized as NAAS fellow



Dr Manish Mahawar (Sr. Scientist, Division of Biochemistry) and Co-authors, awarded for publishing best paper from IVRI during 2017-18, with highest Impact Factor (4.702).



Dr R. P. Singh, Head, Division of Biological Products, attended the PPR Global Research and Expertise Network (PPR-GREN) Inaugural meeting at Vienna (Austria) consisting representatives from FAO and OIE PPR Reference Laboratories, Research institutes, National Veterinary Research Institutes, wildlife conservation and civil society organizations, vaccine manufacturers, regional economic communities, PPR experts, AU-PANVAC, Joint FAO/IAEA Division.



Dr YPS Malik, ICAR-National Fellow, Division of Biological Standardization was appointed as a "Member-International Committee on Taxonomy of Viruses (ICTV) on Birnaviridae and Picobirnaviridae study group".



Dr Srikant Ghosh, Principal Scientist, delivered three lectures focussed on one-health, epidemiology and infectious diseases at different workshops organized at University of Illinois, USA.



Dr Basavaraj Sajjanar, Scientist, has been selected for SERB-DST Overseas Postdoctoral Fellowship, Institute of Genome Biology, Leibniz Institute of Farm Animal Biology, Dummerstorf, Germany.



Dr Mukesh Kumar, Scientist, Division of Biochemistry has been awarded "Netaji Subhash - ICAR International Fellowship 2017-18".

Faculty Training Programs/ Workshops

Training programmes on Recent advances in stress genomics for livestock production, *In vitro* fertilization technique, Techniques of Fracture Fixation in Animals, Diagnostic Radiology and Ultrasonography in Animals, Advanced Nutritional Technologies and Interventions for Dairy Animals, Acclimatization and Adaptation of High Altitude Livestock in Changing Climatic Scenario, Basic Statistical Computing Procedures for Analysis of Experimental Data and Working with MS Excel for Academicians, Researchers, Field Veterinary Officers etc., were organized.



Exposure Visits

Fifty one exposure visits for livestock owners/farmers, students, entrepreneurs and distinguished visitors were organized, with a total of 2347 visitors. They visited various divisions, laboratories, farm sections of the institute. Film shows and interaction meetings were also organized. Growing number of visits of school children reveal the interest of school authorities towards attracting students to Animal Husbandry sector.



Celebrations

Faculty, staff, students, farmers, farm-women and family members celebrated International Yoga Day, Biodiversity Day, World Veterinary Day and World Environment Day organized in all campuses and regional stations.



Patents and Technologies...

Patents (Under Section 43)	Inventors
Granted <ul style="list-style-type: none"> A live attenuated Vero-cell-based goatpox vaccine for protection against goatpox (Patent Application No. 76/DEL/2008)* A phyto-pharmaceutical preparation for the control of acaricide resistant tick infestations in animals. (Patent Application No. 2452/DEL/2010)* 	<p>Madhusudan Hosamani, Raj Kumar Singh, S K Bandopadhyay, S K Singh, Sukdev Nandi, B Mandal and M P Yadav</p> <p>Srikant Ghosh, Ajay Kumar Singh Rawat, Sharad Srivastava, Subha Rastogi, Debdatta Ray, Anil Kumar Sharma, Shashi Shankar Tiwari, Pallab Chaudhuri and Amitabh Bandyopadhyay</p>
Filed <ul style="list-style-type: none"> Anti-tick phyto-molecule for the management of acaricide resistant species infesting livestock (Patent Application No. 201711020314) 	<p>Ghosh Srikanta, Kumar Rajesh, Tayade Amol Bapurao, Chigure Gajnan Madhavrao, Rawat Ajay Kumar Singh, Nagar Gaurav, Srivastava Sharad, Agarwal Pawan Kumar, Gupta Suman, Sarvanan BC and Pandey Madan Mohon</p>

* Pending NBA approval

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Title (Application/ Registration number)	Author(s)
<ul style="list-style-type: none"> IVRI-Pig Farming (<i>Shookar Palan</i>) in Hindi Language (22/2018-Co/L Dt. 01.01.2018) IVRI-Animal Reproduction App. in Hindi, Punjabi and English Languages (21/2018-Co/L, 24/2018-Co/L and 23/2018-Co/L Dt. 01.01.2018) 	<p>Rupasi Tiwari <i>et al.</i></p> <p>Rupasi Tiwari <i>et al.</i></p>



Technologies Commercialized

- Jaigopal Vermiculture Technology
- Vegetable incorporated meat products
- Premium Chicken Soup
- Traviport Design



Transfer of *Jaigopal* Vermiculture technology

Students' Corner...

Dr Rajeev Ranjan, PhD student of the division of Veterinary Pathology was awarded “Jawaharlal Nehru Award (2017)” for Outstanding Doctoral Thesis Research by Shri Radha Mohan Singh Ji, Union Agriculture and Farmers Welfare Minister on ICAR Foundation day at New Delhi.

Dr Rajeev Ranjan did his Ph.D. research on “Immunopathology and persistence of Foot and Mouth Disease virus following natural infection in cattle and buffaloes in India” under the supervision of Dr K.P. Singh, Principal Scientist, CADRAD.



Dr Mashidur Rana (Ph. D. scholar) has been selected for four months Newton-Bhabha Ph. D. Placement Programme (2017-18) at London School of Hygiene and Tropical Medicine, London.



Dr Ratanti Sarkhel (Ph. D. scholar) presented paper at 6th Mediterranean Poultry Summit, 18-20th June, 2018, Torino, Italy.



Modular Laboratory Building, ICAR-IVRI, Izatnagar, Bareilly (U.P.), India

Welfare Initiatives for Livestock Owners ...



Technologies/innovative tools for improving animal health and production were showcased at various platforms like Global Farmers Agri Expo-2018 in Pune, Farmers' Conclave in Bengaluru, Kisan Mela-cum-Technology Demonstration in Kalyani (West Bengal), *Pt. Deen Dayal Upadhyay Vrihad Pashu Aarogya Shivir* at Bareilly, Agri Expo-at CSAUA&T, Kanpur (UP), *Krishi Kumbh* at GBPUA&T, Pantnagar, *Kisan Mela* at IVRI Campus, Mukteswar, and *Rashtriya Krishi Unnati Mela* at Pusa, New Delhi. About 4380 participants visited the exhibitions and showed keen interest in IVRI technologies.

Animal Health Camp-cum-Awareness Programmes: *Kisan Goshthi*, Animal Health Camp-cum-Awareness Programme, Farm innovators meet, *Goshthi* on World Water Day in West Bengal, Maharashtra, Assam and Uttar Pradesh to appraise the livestock owners about water conservation, soil testing, different aspects of scientific approaches for animal rearing systems, health management, pig husbandry, artificial insemination in pigs, vaccination and its role in management of disease outbreaks.

Workshops: The IVRI-TEC, Pune organized two workshops, viz., 'Technologies in Animal Nutrition and Organic Animal Husbandry', in Satara and 'Advanced Nutritional Technologies and Interventions for dairy animals' in Pune. One hundred and Sixty dairy farmers and officers of milk federations, industries, state AH department and entrepreneurs had participated in the workshop.

Training Programmes: Training on *Vaigyanic pashupalan takniki*, Herd management and breed improvement, Changing paradigms in agricultural extension: New demands need new capacities, Farmers' empowerment, Acclimatization and adaptation of high altitude livestock in changing climatic scenario, Pig Farming, Organic livestock production certification and commercial dairy production were organized.

Skill Development: Programme on making of pickles, squash, jam, goat farming for Uttar Pradesh and West Bengal state were organized. Twenty seven participants attended these programmes. Self-financed entrepreneurship development programme for 17 entrepreneurs from Uttar Pradesh and Uttarakhand on pig production was also organized. Under the program of goat farming for livelihood improvement, the goats (4 female, 1 male) of *Osmanabadi* breed were distributed to ten tribal farm women in Gawandh tribal village (Nashik, Maharashtra).

Personalia...

Joined Us

- Dr (Mrs) Gauri Jairath, Scientist, Division of Livestock Production and Technology

Retired

- Dr R. K. Agarwal, Pr. Scientist, Division of Bacteriology and Mycology
- Dr P. P. Goswami, Pr. Scientist, Division of Veterinary Biotechnology
- Shri Surendra Nath, CTO, CIF, Division of Veterinary Biotechnology
- Shri Chandra Prakash, AAO
- Shri A. K. Sharma, AAO
- Shri M. K. Saxena, AAO
- Shri Rajendra Singh, T.O.
- Shri C. P. Saini, T.O.



Thank you for your services

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