

ICAR- Indian Veterinary Research Institute, Izatnagar (UP) and Training and Education Centre, Pune, Successfully Organised a Workshop on “Recent Approaches for Managing Emerging and Re-emerging Diseases” and an Interface Meet # 2 with the Department of Animal Husbandry, Maharashtra on 10th September 2024, at Pune

ICAR-IVRI successfully organized a Workshop on "Recent Approaches for Managing Emerging and Re-emerging Diseases" followed by **Interface Meet # 2** at Pune (Maharashtra) on 10th September 2024. The event was graced by Chief Guest, Dr Triveni Dutt, Director cum Vice-Chancellor, ICAR-IVRI, Izatnagar and Dr Pravinkumar Deore (IAS), Commissioner, Department of Animal Husbandry, Government of Maharashtra as Guest of Honour. The interface meet saw participation from key figures, including Shri Prakash Ahirrao (Joint Commissioner of AH), Dr S Bedkyale (Joint Commissioner & In-charge IVBP), Dr Sunil Lahane (Joint Commissioner & In-charge DIS), Regional Joint Commissioners, Deputy Directors, District Animal Husbandry Officers, Deputy Commissioners, Assistant Commissioners and veterinary officers from the Department of Animal Husbandry, Maharashtra. Delegates from IVRI Izatnagar included Dr SK Singh (Joint Director, Res), Dr Rupasi Tiwari (Joint Director, EE), Dr Kiran Bhilegaonkar (Head, VPH Division), Dr Pronab Dhar (Head, Standardization Division), Dr G Saikumar (In-charge, PME Cell) and Dr Bablu Kumar (In-charge, ZTMU). Others present online were Dr SK Mendiratta (Joint Director, Acad), Dr Sohini Dey (Joint Director, CADRAD), Dr Pallab Chaudhary (Joint Director, Bengaluru Campus), Dr YPS Malik (Joint Director Mukteswar Campus), Dr Arnab Sen (Head, Kolkata Centre), Dr Gorakh Mal (Head, Palampur Centre), and Heads of various Divisions of IVRI. A total of 365 participants from the Department of Animal Husbandry, Maharashtra (112 attended physically) and other states, and staff and students of IVRI (79), have registered and attended the meeting held on hybrid mode.

During the inaugural session, Dr HP Aithal, Station In-Charge, TEC Pune, extended a warm welcome to all dignitaries, setting the stage for insightful discussions on the critical topic of disease management in the livestock sector.



(Dr Triveni Dutt, Director cum VC, ICAR-IVRI, delivering inaugural address)

Dr Rupasi Tiwari, Joint Director (EE) and the Organizing Secretary of the event, in her address emphasized the importance of organising such collaborative meets, highlighting that ICAR-IVRI has hosted several interface meets with various stakeholders. She presented an elaborate Action Taken Report (ATR) on the key points identified during the previous meeting with the Department of AH,



(Dr Rupasi Tiwari, Joint Director EE, addressing at the event)

Maharashtra. The ATR covered crucial areas such as breeding policies, feed technologies, mastitis treatment, reproductive technologies, and antibiotic resistance, showcasing the institute's commitment to addressing critical issues in animal health and management. Dr Tiwari further outlined the expectations of participants for the workshop and shared valuable insights gathered from the registration forms. According to the participants, challenges in diagnosing and treating animals, lack of equipped laboratories at the field level and technical trainings, difficulties in differential diagnosis (non-availability of rapid diagnostic kits/methods) and antimicrobial resistance (AMR) were the primary concerns. Participants also highlighted the need for advanced veterinary technologies such as embryo transfer technologies (ETT, IVF), and multivalent and polyvalent vaccines. In response to the question regarding the most significant problems affecting livestock in their regions, participants emphasized reproductive disorders (infertility), infectious diseases (including FMD, LSD, brucellosis, HS, BQ, salmonellosis, PPR, leptospirosis, goat pox etc.), mastitis, haemoprotozoan diseases (Theileriasis) and nutritional deficiencies. The researchable areas raised by the participants included genetic improvement of livestock, development of polyvalent, protozoan and oral vaccines, AMR, metabolic diseases, rapid diagnostic tests, infertility, plant poisoning and nutritional interventions. They also expressed keen interest in receiving training from IVRI in various advanced areas and technologies such as clinical and molecular diagnostic techniques, GMP, infertility, surgical and imaging techniques.

Dr Pravinkumar Deore (IAS), Commissioner of Animal Husbandry, Government of Maharashtra, highlighted the various welfare programmes implemented by the department aimed at improving farmers' livelihoods and ensuring optimal animal health services. He emphasized the importance of preventive measures for diseases like PPR, LSD and brucellosis, which have been key areas of focus. Dr

Deore also addressed the growing concern of antimicrobial resistance (AMR), describing it as a pressing issue that requires immediate attention. He stressed the pivotal role field veterinarians can play in disease diagnosis, control and mitigating AMR through responsible practices and timely interventions. Dr Deore lauded the collaborative efforts of ICAR-IVRI in organizing this unique platform for dialogue between key stakeholders. He praised ICAR-IVRI for facilitating these discussions and fostering cooperation to enhance the quality of livestock healthcare in Maharashtra. The workshop, according to him, serves as a crucial step towards ensuring better health services for livestock across the state, driven by scientific advancements and a shared commitment to animal welfare.



(Dr Pravinkumar Deore, IAS, Commissioner AH, addressing the participants)

Dr Triveni Dutt, Director, ICAR-IVRI, highlighted the institute's significant contributions in the field of animal health and production, emphasizing its pivotal role in the eradication of several diseases and the development of animal vaccines in the country. He noted that IVRI is the sole provider of antisera and various diagnostic reagents to state biological units. IVRI also performs quality control testing of vaccines, which is a vital national service. Presently, IVRI tests 23 viral and 11 bacterial vaccines, including 200 batches of brucella and PPR vaccines, and 400 batches of FMD vaccines, with plans to scale up to testing more than 800 vaccine batches in the near future. Through CADRAD, IVRI responds to disease outbreaks and issues national advisories while also strengthening Regional Disease Diagnostic Laboratories (RDDL) across the country. Dr Dutt further elaborated on the strategic initiatives taken by ICAR-IVRI to align with the expectations of the Government of India and other stakeholders. These include revising the institute's mandate and implementing the National Education Policy (NEP). He shared that IVRI has introduced more than 90 diploma, vocational and certificate courses, along with postgraduate programmes including MVSc in 17 disciplines, PhD in 19 disciplines, an MBA in agri-business, MSc in biotechnology, and various online diploma (ODL) courses. The institute's rich intellectual property (IP) portfolio consists of 32 patents, 21 designs, and 41 copyrights. As of now, IVRI has commercialized 44 technologies including 11 vaccines, 9 diagnostics, 7 designs, 3 animal feed and nutrition products, 7 livestock products, and 4 therapeutics to 150 industrial partners. Notably, the recent commercialization of the lumpy skin disease vaccine stands out among IVRI's many innovations. Additionally, IVRI has developed over 184 ICT tools and AI-based mobile applications to support animal health initiatives. Dr Dutt also highlighted IVRI's critical role in the National Animal

Disease Control Programme (NADCP), a flagship initiative launched by the Hon'ble Prime Minister in 2019 aimed at controlling Foot and Mouth Disease by 2025 and eradicating it by 2030, as well as the Brucellosis control programme through rigorous QC testing of vaccines. He mentioned IVRI's efforts in mentoring and establishing 178 start-ups under the RKVY-RAAFTAR programme, with financial support amounting to ₹ 2.3 crores. Dr Dutt expressed his gratitude to the State Animal Husbandry Department officials and veterinary officers for their active participation and contributions during the workshop. He concluded by stating that the workshop-cum-interface meet would provide valuable insights to the participants, aiding in their future endeavors and researchable issues for scientists.



(Glimpse of proceedings of inaugural session of workshop)

The first technical session was chaired by Dr SK Singh and co-chaired by Dr G Saikumar. The session focused on emerging and re-emerging diseases with an emphasis on animal-human health and preparedness for future outbreaks. Dr P Dhar, Head, Division of Standardization, delivered an in-depth presentation on diseases such as rabies, brucellosis, tuberculosis, Japanese encephalitis, Kyasanur Forest Disease, coronaviruses, Ebola, SARS, Nipah virus, avian influenza, antimicrobial-resistant pathogens, and vector-borne diseases like Zika, yellow fever, Chikungunya, and Crimean-Congo hemorrhagic fever. He discussed the host species, geographical distribution, and the key factors responsible for occurrence and transmission. The containment strategies using a One Health approach, intensive disease surveillance (ProMED and IDSP), and preparedness for Public Health Emergencies of International Concern (PHEIC) were emphasized for better handling of future outbreaks.

Dr KN Bhilegaonkar, Head, Division of Veterinary Public Health, addressed the critical issue of antimicrobial resistance (AMR) and its management. He presented data on global antibiotic consumption in food animals, identifying 'hot-spots' of AMR, particularly in the pork and poultry industries, which pose significant challenges to human health. He explained the sources of resistance, including contamination of the food chain by pharmaceutical effluents, and elaborated on the consequences of AMR on both animal health and productivity, highlighting the resulting economic losses. Dr Bhilegaonkar also discussed the national plan to contain AMR, focusing on active surveillance, mass awareness campaigns, human resource development, and the implementation of guidelines from international organizations such as the World Health Organization (WHO), World

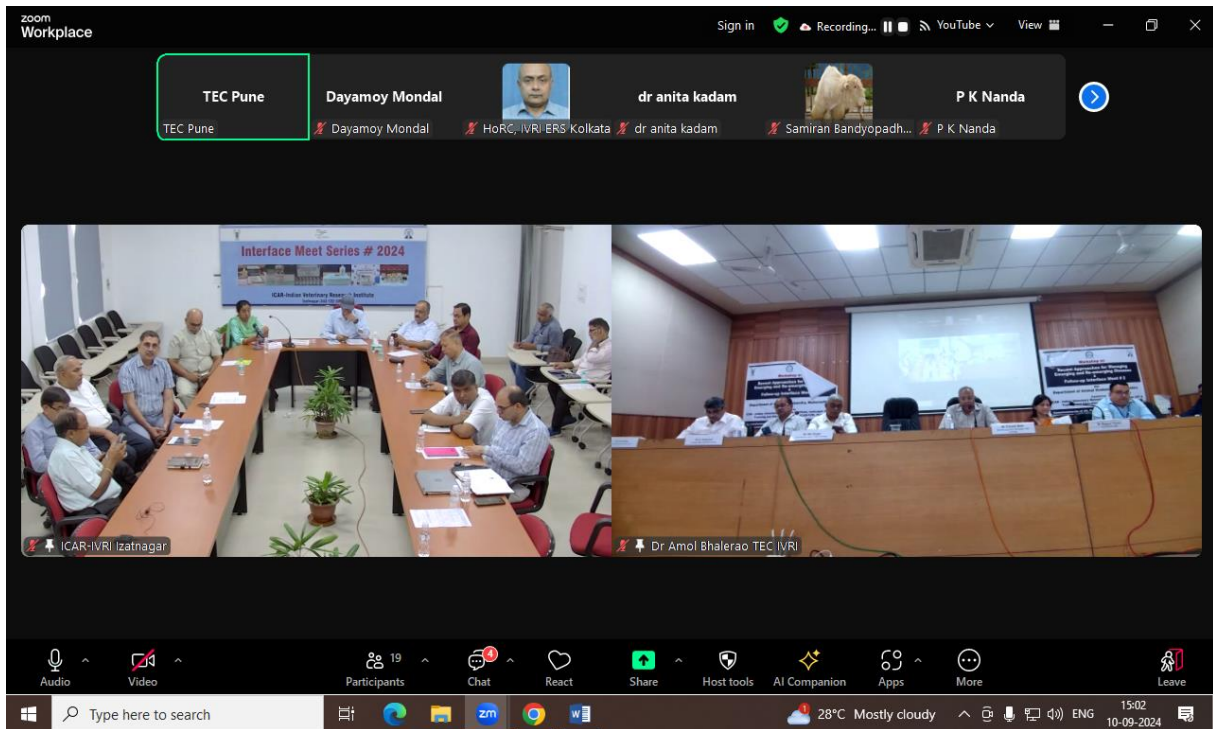
Organisation for Animal Health (WOAH), United Nations Environment Programme (UNEP), and Food and Agriculture Organization (FAO).



(Dr KN Bhilegaonkar, Head, Division of Veterinary Public Health delivering his talk)

Dr Bablu Kumar, Principal Scientist & I/C ZTMU, IVRI, presented key technologies developed by IVRI for the diagnosis and prevention of animal diseases. These included a range of innovative vaccines such as the negative marker FMD vaccine, thermotolerant FMD vaccine, marker IBR vaccine, Lumpy Skin Disease vaccine, and vaccines for buffalo, sheep, and goat pox. He also highlighted thermo-adapted PPR and negative marker PPR vaccines, the Classical Swine Fever (CSF) vaccine, Japanese Encephalitis (JE) vaccine, Small Volume Packaging (SVP) Gumboro vaccine, duck plague vaccine, canine parvovirus, and canine distemper vaccines, as well as combined vaccines. In addition, Dr Kumar discussed the institute's advancements in diagnostic and therapeutic technologies aimed at improving livestock health and productivity.

Afterwards, Dr HP Aithal, Station In-charge, TEC-IVRI Pune, showcased the Centre's initiatives for capacity building and livelihood enhancement. He detailed the Centre's efforts to address the training needs of veterinary officers, recording livestock disease incidence, and organizing demand-driven training programmes and workshops. These initiatives include advanced imaging techniques, fracture fixation techniques, GMP (Good Manufacturing Practices) training, laboratory techniques, infertility management, and online training programmes on variety of soft skills. Dr Aithal also emphasized the Centre's engagement in webinars, interface meetings, SCSP and TSP programmes for underprivileged farmers, *Kisan Melas*, animal health camps, panel discussions, and consultancy services. He highlighted the development of strong linkages with the animal husbandry departments, universities, and industries to further strengthen the livestock sector.



(Dr Pronab Dhar, Head, Division of Standardization addressing a query from a participant)

The Technical Session 2 cum panel discussion, chaired by Dr Rupasi Tiwari, Joint Director (Extension Education), provided an engaging platform for participants to seek expert advice on a range of topics. Queries were raised on vaccination protocols for brucellosis, the feasibility of combined HS, BQ and FMD vaccinations, early detection methods of wildlife diseases to prevent their zoonosis, the potential of herb-based therapies and homeopathic treatments for the control of mastitis and LSD. Participants also discussed innovative solutions such as oral bait vaccines for control of rabies, sustained-release antibiotics, and strategies for germplasm improvement and control of AMR by strict guidelines for use of antibiotics. They also demanded customized trainings in various areas of livestock health and management. Experts from IVRI addressed each query in detail, offering valuable insights into the latest developments in veterinary science and biological supply management.



(Group photograph of delegates of Interface Meet # 2)

Dr Amol K Bhalerao Scientist TEC Pune and Dr Akhilesh Kumar, Scientist, Division of Medicine, IVRI, Izatnagar, coordinated the technical sessions. Dr SK Das, Principal Scientist and Dr SV Bahire, Scientist, TEC Pune acted as Rapporteurs for the technical sessions. The workshop concluded with a formal vote of thanks delivered by Dr Amol Bhalerao, marking the successful closure of the event.