



NIVEDI PULSE

NIVEDI PULSE - March 2026

RAC Meeting Provides Strategic Direction for Disease Surveillance and Intelligence

The ICAR–NIVEDI, Bengaluru, convened its 18th Research Advisory Committee (RAC) meeting on 9th March 2026 under the chairmanship of J. P. S. Gill, Vice Chancellor of Guru Angad Dev Veterinary and Animal Sciences University (GADVASU), Ludhiana. The meeting witnessed the participation of distinguished experts from across the country. Mruthyunjaya, former Director of National Institute of Agricultural Economics and Policy Research (NIAP), and Ashok Kumar Tiwari, former Director of ICAR–Central Avian Research Institute (ICAR–CARI), attended the meeting in person. Other eminent members including M. M. Parida, Director of Defence Research and Development Establishment (DRDE), and Divakar Hemadri, Assistant Director General (Animal Health) at Indian Council of Agricultural Research (ICAR), joined the meeting through virtual mode. Baldev Raj Gulati, Director of ICAR–NIVEDI, presented an overview of the institute’s recent progress and achievements in the areas of livestock disease epidemiology, surveillance systems, disease modelling, and veterinary disease informatics. The Action Taken Report (ATR) on the recommendations of the previous RAC meeting was

presented by S. S. Patil, Member Secretary of the RAC. During the meeting, research group leaders showcased major scientific accomplishments and ongoing research activities related to bovine, small ruminant, and pig disease epidemiology, along with advancements in disease intelligence, predictive analytics, and socio-economic impact studies related to livestock diseases. The committee provided valuable strategic guidance to strengthen risk-based disease surveillance, enhance near real-time digital disease reporting through the National Animal Disease Epidemiology Network (NADEN), and improve predictive disease intelligence and forecasting systems. The RAC also emphasized the importance of assessing the impact of vaccination programmes through improved coverage monitoring and sero-surveillance, while encouraging stronger interdisciplinary collaborations aligned with the One Health approach. The meeting concluded with a vote of thanks, acknowledging the valuable guidance and recommendations of the RAC members in strengthening the research programmes and national disease intelligence initiatives of ICAR–NIVEDI.



ICAR NIVEDI
Transforming Animal Health

Animal Husbandry Commissioner Visits ICAR–NIVEDI; Emphasizes Strengthening Disease Control and Global Scientific Footprint

Dr. Naveena B.M. Animal Husbandry Commissioner (AHC), Department of Animal Husbandry and Dairying (DAHD), visited ICAR–NIVEDI, Bengaluru, and called for enhanced disease control strategies and a stronger global scientific footprint for India's livestock sector. Welcoming the dignitary, Dr. Baldev R. Gulati, Director of ICAR–NIVEDI, highlighted the institute's expanding role in livestock disease epidemiology, forecasting, and decision-support systems for national programmes. He also appreciated the institute's strong and ongoing collaboration with DAHD. During the interaction, Dr. Gulati outlined key policy priorities, including revisiting culling strategies for endemic diseases and strengthening brucellosis control by increasing vaccination from the current single round to three annual rounds. These measures, he noted, could significantly improve disease control outcomes. Commending the institute's contributions, Dr. Naveena B.M. released

the *Active Surveillance Framework for Monitoring of Peste des Petits Ruminants (PPR) Virus Infection in Goats and Sheep in India* for systematic clinical and virological surveillance, as well as *Sampling Plan-4* for assessing PPR population immunity in goats and sheep in India following the third round of vaccination. He lauded NIVEDI's leadership in advancing livestock health and acknowledged its technical support to various DAHD programmes. He emphasized the importance of building a stronger international scientific presence and reaffirmed DAHD's continued support to the institute, including through initiatives such as the Pandemic Fund. Accompanying the Commissioner, Dr. Aruna Sharma, Joint Commissioner, appreciated NIVEDI's role in disease forecasting and early warning systems. The programme was coordinated by Dr. S.S. Patil, Principal Scientist.



Dr Balamurugan Addresses End-Game Challenges in Disease Elimination at NIV Workshop

Dr. V. Balamurugan delivered an invited lecture on disease elimination strategies at a workshop on "Giant Viruses, Disease Elimination and IPR," organized by ICMR–NIV and the NIV Research Foundation on 6 March 2026 in Pune. He focused on end-game

challenges — surveillance gaps, silent transmission, and the need for integrated epidemiological data and rapid response systems — drawing on lessons from global eradication programmes.

UNDP Delegation Explores Collaboration on Livestock Disease Forewarning

A delegation from United Nations Development Programme (UNDP) visited ICAR–NIVEDI on March 25, 2026, and held discussions with the institute's National Animal Disease Referral Expert System (NADRES) team to explore potential collaboration in

the field of livestock disease forewarning. During the interaction, the NADRES team presented the institute's capabilities in real-time disease surveillance, risk assessment, and early warning systems. The discussions focused on leveraging advanced analytics and digital

tools to strengthen forecasting systems and improve preparedness against emerging and re-emerging livestock diseases. The UNDP representatives expressed keen interest in collaborating with ICAR–NIVEDI to enhance early warning frameworks and support

evidence-based decision-making for disease prevention and control. The interaction marked a significant step toward fostering international cooperation in the domain of One Health and zoonotic disease management.



NaaViC Drives Agripreneurship and Innovation Activities

During March 2026, NaaViC, the agri-business incubation centre at ICAR-NIVEDI, spearheaded a comprehensive suite of programs designed to catalyse the agri-startup ecosystem and enhance rural livelihoods. The month began with focused capacity building, including a three-day Entrepreneurship Development Program (EDP) on Sericulture for 45 farmers in Chintamani and an orientation session that inspired over 130 students to explore the NUZEN initiative.

This momentum continued with a specialized training on Sheep and Goat Farming for 40 farmers in Hassan, emphasizing the transition from traditional livestock management to viable scientific enterprises. Beyond local training, NaaViC strengthened its institutional framework through an RKVY-RAFTAAR Due Diligence Meeting on March 11 to review incubation progress and strategic growth.



The centre also expanded its national and sectoral footprint by participating in the SAMARTH 2026 “Empowering the Incubators” summit in New Delhi, which facilitated vital knowledge exchange with national incubation leaders. Furthering its educational outreach, NaaViC hosted an exposure visit for Coffee Board students on March 24, providing them with

practical insights into agribusiness success stories and value addition. Collectively, these initiatives underscore NaaViC’s pivotal role in fostering innovation, supporting agripreneurs, and bridging the gap between academic research and sustainable commercial ventures in the agricultural sector.

Training on AI-Driven Surveillance and Digital Tools at Guwahati

ICAR–NIVEDI conducted a one-day training on AI-driven surveillance and digital disease tools on 16 March 2026 at Assam Veterinary and Fishery University, Guwahati, for veterinarians and scientists. Sessions covered AI applications in disease surveillance, meta-analysis for disease burden estimation, and mobile-

based tools for forewarning and diagnosis. Participants received hands-on training on the NERLDF mobile application and its integration with the PDDES expert system for field-level disease diagnosis and early warning.



Nandidurga Goat Distribution Programme

An input distribution programme was successfully organized on March 23, 2026, at Pemmdevarahalli for Scheduled Caste (SC) beneficiaries under the Development Action Plan for Scheduled Castes project. The initiative aimed to promote indigenous goat conservation and enhance sustainable livelihood opportunities through scientific goat rearing. The programme was led by Dr. Narayanan G., Senior Scientist, who interacted with the beneficiaries and highlighted the economic potential of the Nandidurga goat. He emphasized the importance of adopting scientific management practices to improve productivity, health, and household income. As part of

the initiative, high-quality Nandidurga female goats were distributed to selected beneficiaries to support income generation and breed conservation. The project team also conducted field-level assessments of the socio-economic status of the farmers and provided on-site guidance on housing, feeding, healthcare, and overall management of the animals. The programme marked a significant step towards empowering socially disadvantaged communities through livestock-based interventions, reinforcing the role of small ruminants in improving rural livelihoods and promoting sustainable agriculture.



Animal Health Camp, Training and Input Distribution Programme

An animal health camp, training, and input distribution programme was successfully organized on March 25th, 2026, at Kurumarlahalli for Scheduled Tribe (ST) farmers under the Development Action Plan for Scheduled Tribes component of the externally funded CRISPR project. The initiative aimed to enhance farmers' knowledge of scientific livestock management and improve livelihood opportunities. The programme was led by Dr. Manjunath Reddy, Senior Scientist, who emphasized the importance of adopting improved livestock management practices to enhance productivity and ensure sustainable livelihoods. Specialists from the Veterinary Department delivered expert sessions on disease prevention, feeding practices, breeding management, and overall livestock development,

followed by a structured training programme on scientific animal husbandry practices. Dr. Satish Gowda C. S. Scientist, also addressed the participants, highlighting practical livestock management strategies and effective implementation of improved practices at the field level. As part of the programme, input kits were distributed to identified beneficiaries to support livestock-based activities and strengthen farm-level resilience. The event witnessed active participation from around 75 livestock farmers, reflecting strong community engagement. The programme marked an important step toward empowering tribal farming communities through capacity building, improved animal health services, and sustainable livestock-based livelihood interventions.



One Health Awareness and Medical Camp for Dairy Farmers

Under the ICAR-All India Network Project on One Health, a comprehensive awareness programme and medical camp were successfully organized on March 27, 2026, at Tondebhavi for Scheduled Caste (SC) dairy farmers with the support of Karnataka Milk Federation in empowering the local farming community. The programme, led by Dr. Rajeswari Shome, Principal Scientist, sensitized around 100 participants on the transmission and prevention of major zoonotic diseases such as Brucellosis, Anthrax, and Leptospirosis. The initiative emphasized the importance of farm hygiene, biosafety, and early disease detection in safeguarding both animal and human health. Technical sessions were delivered by officials from Chikkaballapur Milk Union Limited, including Mr. J. Kanth Raju and Dr. Narendra, who highlighted the need for coordinated

efforts in vector control and improved sanitation practices. To support scientific dairy management, essential inputs such as milk buckets and disinfectants were distributed to 75 identified beneficiaries. A key highlight of the programme was the integrated human–animal health screening conducted in collaboration with MVJ Medical College and Research Hospital. Medical teams carried out comprehensive health check-ups for 54 dairy farmers, including blood sample collection for diagnostic screening (CBC, RFT, LFT, and ECG), along with testing for zoonotic pathogens at ICAR–NIVEDI. This “One Health” intervention effectively combined clinical services with socio-economic assessment, reinforcing the critical link between livestock hygiene and human well-being.



Training on FAO-ATLASS Strengthens AMR Surveillance Capacity

A three-day training programme on the *FAO Assessment Tool for Laboratories and AMR Surveillance Systems (FAO-ATLASS)* was successfully organized at the ICAR-NIVEDI, in collaboration with the Food and Agriculture Organization of the United Nations India office from March 31 to April 2, 2026. The programme aimed to enhance laboratory assessment capacity and strengthen antimicrobial resistance (AMR) surveillance systems in the country. A total of 30 participants, including representatives from State Veterinary Diagnostic Laboratories and research scholars, actively took part in the training. Experts from FAO India, including Dr. R. K. Singh (AMR, zoonoses and epidemiology specialist), Dr. Jyoti Misri, Dr. Manju Soman, and Dr. Priyanka, contributed as key faculty members and provided

valuable insights into AMR surveillance frameworks and laboratory assessment methodologies. Dr. B. R. Gulati, Director, highlighted the critical importance of AMR surveillance in livestock and elaborated on NIVEDI’s pivotal role in strengthening national disease monitoring systems. The technical sessions were further supported by resource persons Dr. Z. B. Dubal and Dr. N. Shivasharanappa, from NIVEDI who facilitated hands-on training on the FAO-ATLASS tool. The programme provided a comprehensive platform for capacity building, fostering collaboration, and equipping participants with practical skills to assess and improve laboratory systems for effective AMR surveillance across India.



DISEASE RADAR

Animal Health and Zoonotic Threats: India in Global Context

In March 2026, India reported multiple significant animal disease events, predominantly driven by highly pathogenic avian influenza (H5N1) affecting both captive and domestic bird populations. In Tamil Nadu, an outbreak of H5N1 was reported at the Guindy Children's Park in Chennai, where nearly 40 birds, including pelicans, herons and painted storks, died within a week starting around March 13, leading to the temporary closure of the park to the public for containment and disinfection measures (The New Indian Express, 20 Mar 2026). Concurrently, in Maharashtra, an outbreak at a government poultry hatchery in Nagpur resulted in the death of around 800–1,000 birds, followed by culling of approximately 1,000 birds and destruction of nearly 14,000 eggs to contain the infection, with suspected linkage to migratory bird activity (Times of India, 2026). In Chhattisgarh, a major outbreak in Bilaspur led to the death of approximately 5,500 chickens, prompting the establishment of a containment zone and intensified surveillance and culling operations (Times of India, 2026). Similarly, in Kerala, fresh detections of H5N1 in poultry farms resulted in the culling of birds in affected districts, indicating continued recurrence of avian

influenza in endemic poultry regions (Times of India, 2026). These geographically dispersed events indicate active circulation of avian influenza viruses across both captive and production systems, likely influenced by interactions with wild and migratory birds. Globally, early 2026 continues to be dominated by the ongoing H5N1 avian influenza panzootic, with widespread outbreaks reported across multiple continents affecting wild birds, poultry and several mammalian species (FAO, 2026; WOA, 2026), alongside sporadic zoonotic spillover events including isolated human H5N1 infections in Southeast Asia and Nipah virus cases in South Asia (WHO, 2026; ECDC, 2026). Europe reported its first human case of H9N2 avian influenza in Italy (March 2026), involving a mild infection in a child with prior exposure outside the region. Although the immediate public health risk is low, the case highlights the need for continued vigilance and robust surveillance. It underscores the importance of integrated One Health approaches and coordinated global responses to address emerging zoonotic threats.

Epi Insights

Epidemic curve (Epi curve)

An epidemic curve (or epi curve) is a graphical representation in the form of histogram (bar chart) that shows the distribution of cases against time of onset. The time intervals (date/time of illness onset) are displayed on the x-axis, and case counts are displayed on the y-axis.

The epi curve is an essential tool in an outbreak investigation and a key feature of descriptive epidemiology. The epi-curve can provide valuable information regarding the outbreak: i.e most likely period of exposure, distribution of cases over time, magnitude of the outbreak, peak of the outbreak, pattern of spread, outliers cases. The epi-cure is often included in the epidemiological (epi) summary and the epi curve should be continuously updated as the outbreak progresses.

In common source outbreaks involving diseases with known incubation periods, epi curves can help determine the probable period of exposure (Figure). To estimate the minimum incubation period count back the minimum incubation period days from the earliest case. Similarly, count back the days of average incubation period from the peak of the epi curve. The time between the average and the minimum incubation period represent the probable period of exposure.

The epi curve should always include pre-epidemic period to illustrate the baseline number of cases. The time interval x-axis may be hour, day of onset. The choice of time interval depends on the incubation period of the illness and the time interval of the outbreak.

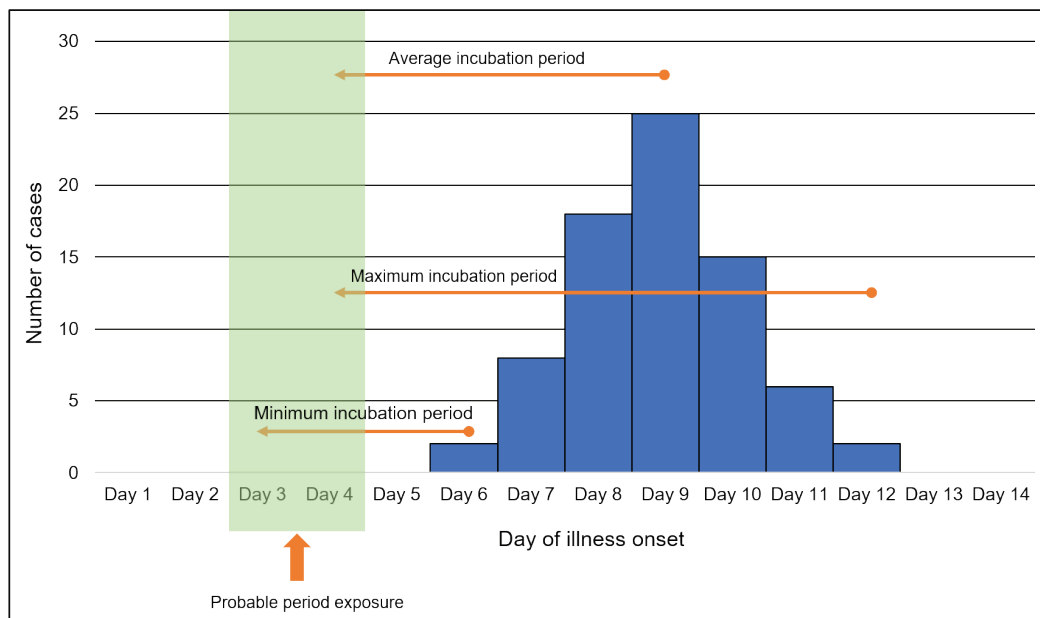


Figure: Example of a point source epidemic curve with estimated exposure period

Editorial Team : V. Balamurugan, G. Narayanan, Siju Susan Jacob, H. B. Chethan Kumar
 Published by : Director, ICAR-NIVEDI, Bengaluru

Contact Details

ICAR-National Institute of Veterinary Epidemiology and Disease Informatics

Ramagondanahalli, Yelahanka, Bengaluru - 560 119, Karnataka.

Phone: 080-23093110, 23093111, 23093100

Email:director.nivedi@icar.org.in Website:www.nivedi.res.in

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