

Digitisation of National Animal Disease Intelligence

Hon'ble Shri Rama Shankar Sinha Ji, Additional Secretary (Livestock Health), Department of Animal Husbandry & Dairying (DAHD), Government of India, New Delhi, stated that national animal disease intelligence is being digitised under the National Digital Livestock Mission (NDLM) to strengthen disease surveillance, early warning, and evidence-based decision-making in the livestock sector. He made these remarks during his visit to the ICAR–NIVEDI, Bengaluru, on 6 January 2026.

The dignitary was welcomed by Dr. S. S. Patil, Principal Scientist, and briefed by Dr. Baldev R. Gulati, Director, ICAR–NIVEDI, on the institute's national mandate and its role in supporting digitally enabled livestock health governance. Shri Sinha Ji visited the Disease Informatics Laboratory, WOA Reference Laboratory, Agri-Business Incubator, and the advanced BSL-2++ core laboratory, where scientists of the institute explained ongoing work on

disease surveillance, diagnostics, epidemiological modelling, and NDLM-aligned decision-support systems.

During the interaction, Dr. Gulati highlighted the steps being undertaken to pilot a Disease-Free Zoning framework at the district level, with a view to testing and scaling it up at the state and national levels. He emphasised that this science-based framework would facilitate the creation of livestock disease-free zones, in line with international standards, to promote international trade in livestock and livestock products.

Shri Sinha Ji assured that DAHD would extend full support to ICAR–NIVEDI in implementing its new initiatives, particularly those aligned with NDLM-driven digitalisation and disease-free zoning. The visit was also graced by Dr. P.S. Mahesh, Joint Commissioner, DAHD, Bengaluru, who interacted with scientists and appreciated the institute's role in strengthening national livestock health systems.



NIVEDI and Penn State Advance Livestock Disease Modelling Collaboration

A one-week scientific visit to the Pennsylvania State University, USA was undertaken in January 2026 by Dr. Baldev Raj Gulati, Director, ICAR–NIVEDI, Bengaluru, under the DARE-approved INLEAD (National Livestock Disease Epidemiology and

Modelling) project to strengthen NIVEDI- in livestock disease epidemiology and modelling. During the visit, India's disease intelligence platforms, including

NADRES and NADEN, were showcased, and focused discussions were held on AI-enabled disease modelling, livestock demography, and early warning systems for transboundary diseases.

The engagement led to exploring new collaborative opportunities in AMR–microbiome surveillance, milk-based disease surveillance, and disease-free compartments, along with academic linkages for joint training and faculty exchange.



ADG (Animal Health), interaction with staff of ICAR-NIVEDI

Dr. Divakar Hemadri, Assistant Director General (Animal Health), ICAR, visited the NIVEDI on 23 January 2026. During his visit, he interacted with the scientists, technical and administrative staff of the institute, listening to their concerns and suggestions. Dr. Hemadri appreciated the Director and scientists for their dedication and the high quality of research and

technical work being carried out at NIVEDI, which has significantly enhanced the institute's recognition at the national and international level. He also commended the institute for its infrastructure development and the well-maintained campus, reflecting a conducive environment for scientific excellence.



National One Health Laboratory Training on Brucellosis and Leptospirosis

ICAR-NIVEDI successfully organized a four-day national laboratory training programme under the All-India Network Programme on One Health (AINP-OH) from 20-23 January 2026. The programme, titled “Strengthening One Health Surveillance, Epidemiology and Sampling Strategies for Brucellosis and Leptospirosis,” focused on harmonising sampling protocols, diagnostic algorithms, and laboratory workflows across participating units. The training included focused technical lectures, interactive sessions, and extensive hands-on laboratory training. Key areas covered laboratory biosafety and biosecurity, sampling strategies at the human-animal interface, One Health spatial mapping, and field-to-laboratory diagnostic workflows. Participants received practical exposure to serological assays, DNA extraction, PCR and real-time PCR, along with culture, isolation and maintenance of *Leptospira*, MAT/LAT, dark-field microscopy, and RT-PCR-based diagnostics.

Addressing the participants, Dr. Baldev R. Gulati, Director, ICAR-NIVEDI, stated that “Strengthening One Health surveillance requires uniform sampling strategies, standardised diagnostics, and integration of

livestock, human, and environmental data to support evidence-based disease control. Dr. Rajeswari Shome, Training Coordinator, highlighted the programme’s practical orientation, stating that the training was designed with a strong hands-on focus to ensure that participating units adopt harmonised protocols-right from biosafety and sampling to advanced molecular diagnostics-under the AINP-OH framework. The programme concluded with a valedictory session chaired by Dr. Divakar Hemadri, ADG (Animal Health), ICAR, who underscored that One Health programmes must move beyond sector-wise functioning. He emphasised that the true focus of such initiatives should be on studying diseases at the livestock-environment-human interface, rather than addressing animal or human health in isolation, and called for dismantling siloed approaches through integrated surveillance, diagnostics, and reporting. Following pre- and post-training evaluations, training certificates were awarded. Eleven participants from seven units, representing both veterinary and human health sectors, participated-strengthening national capacity for integrated surveillance and response to brucellosis and leptospirosis.



77th Republic Day Highlighting Scientific Leadership in Disease Informatics and Surveillance

The 77th Republic Day was celebrated with patriotic fervour at the ICAR-NIVEDI, Bengaluru, with active participation of permanent and contractual staff members. The celebrations commenced with the unfurling of the National Flag by Dr. Divakar Hemadri, Assistant Director General (Animal Health), ICAR, New Delhi, and Dr. Baldev Raj Gulati, Director, ICAR-NIVEDI. Addressing the gathering,

Dr. Gulati highlighted the Institute’s major achievements during the past year, underscoring ICAR-NIVEDI’s expanding national and international leadership in disease informatics, population-based assays, environmental and sentinel surveillance, commodity-based surveillance, disease economics, and digital epidemiology.

He also emphasised the Institute's extension initiatives aimed at strengthening livelihood security of socially and economically marginalised farming communities.

The address further highlighted significant progress in institutional infrastructure development, including hostel construction and renovation, rainwater harvesting and groundwater recharge systems,

forestry initiatives, and promotion of sports and staff welfare activities. In his remarks, Dr. Divakar Hemadri appreciated the Institute's scientific excellence, translational impact, and growing contributions to national and global animal health programmes, commending ICAR-NIVEDI's role in strengthening evidence-based disease surveillance and policy support.



NaaViC Advances Startup Incubation, Industry Linkages and Capacity Building

The National Animal Health and Veterinary Innovation Centre (NaaViC) recorded a series of impactful activities in January 2026, reinforcing its role as a key hub for innovation, entrepreneurship and capacity building in animal husbandry and veterinary sciences.

Strengthening industry connect, NaaViC startups visited Bayer Crop Science on 8 January, gaining exposure to advanced innovation ecosystems, R&D facilities and technology commercialization pathways. NaaViC also participated in the 8th ICC Financial Innovations in BFSI Summit, engaging with emerging financial and digital models relevant to agriculture and rural innovation.

Under the SHITIJ (ICAR–NAIF–ABI) programme, multiple bootcamps and outreach activities were conducted across the country, benefiting over 270 students and professionals. These programmes highlighted startup pathways, innovation support mechanisms and entrepreneurial opportunities in animal health and production.

Further, Review and Incubation Committee (RIC) meetings held on 20–21 January reviewed startup progress and market readiness, resulting in milestone-based funding decisions. Collectively, these initiatives underscore NaaViC's growing role in nurturing startups, strengthening industry–academia linkages and building national capacity in the animal health and veterinary innovation landscape.



DISEASE RADAR

India Demonstrates Strong One Health Response to Zoonotic Outbreaks

In January 2026, India showcased robust One Health preparedness through rapid, coordinated responses to two major zoonotic events involving human and animal populations. In West Bengal, swift molecular confirmation of Nipah virus infection in two patients triggered immediate containment measures, including isolation, intensive monitoring of 196 close contacts throughout the incubation period, and detailed exposure investigations. All contacts remained

negative, and enhanced surveillance at the animal–human interface was initiated following evidence of spillover from fruit bats. Simultaneously, implementing culling, movement restrictions, and veterinary authorities in Kerala responded to outbreaks of highly pathogenic H5N1 avian influenza in commercial poultry by farm disinfection, effectively limiting further spread among birds.

Technical Risk Advisory to Strengthen Animal Health Preparedness

ICAR–NIVEDI, Bengaluru, plays a key role in providing periodic technical risk advisories to national and state animal health authorities, translating epidemiological intelligence into actionable preparedness guidance. As part of this mandate, NIVEDI regularly supports ICAR and the Department of Animal Husbandry and Dairying with science-based assessments to strengthen early warning, surveillance, and coordinated response for emerging animal disease threats.

In its latest advisory, NIVEDI highlights the evolving Foot-and-Mouth Disease (FMD) serotype SAT-1 situation along India's western front, with ongoing circulation reported in Iraq and Iran and an elevated risk of further spread towards Afghanistan and Pakistan. While there is no cause for alarm, the advisory underscores the importance of India's proactive preparedness through heightened surveillance, diagnostic readiness, and inter-agency coordination to prevent potential introduction and safeguard the national livestock sector.

Epi Insights

Understanding R_0 (Basic Reproduction Number)

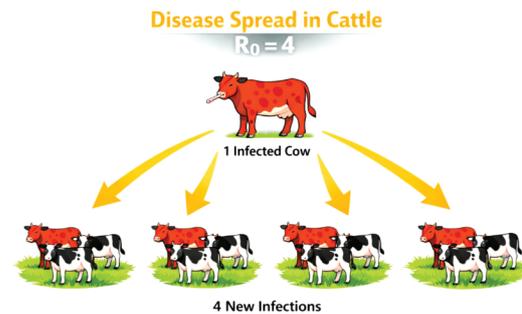
The basic reproduction number (R_0) shows how easily a disease spreads. It is the average number of new infections caused by one infected individual in a fully susceptible population. R_0 depends on the infectious period, contact rate, and transmission route.

Why it matters:

Guides outbreak risk assessment, response planning, impact estimation, and vaccination coverage decisions.

- $R_0 > 1$: Spread likely
- $R_0 < 1$: Outbreak fades out
- $R_0 = 1$: Endemic stability

Indicative R_0 values: African swine fever (5–12) | Anthrax (~1.5) | HS (~2.5) | Measles (12–18) | Malaria (5–100)



ICAR-NIVEDI
Transforming Animal Health

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