



NATIONAL ACADEMY OF VETERINARY SCIENCES (INDIA)

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Dear Esteemed Fellows and Valued Readers.

As we witness an unprecedented increase in global demand for animal products, our animal husbandry sector faces complex challenges in ensuring sustainable production while maintaining optimal animal health and welfare. I am pleased to address these critical developments here, focusing on how technological integration and information management are revolutionizing our sector.

#### **Transformative Technologies**

Advanced Livestock Farming technology has emerged as a game-changer, employing sensors, RFID tags, and reliable devices to monitor animal health parameters in real time. These technologies enable optimized breeding practices, reduced antibiotic usage and early disease detection all contributing to enhanced animal production efficiency.

Artificial Intelligence and Machine Learning continue to demonstrate remarkable potential, offering predictive disease outbreak models and customised nutrition planning. These emerging tools analyse vast datasets to provide veterinarians with evidence-based insights, significantly improving decision-making processes in livestock management.

The current genomics revolution has opened new frontiers in breeding for disease resistance. Through gene editing and genomic selection techniques, we can now develop disease-resistant livestock that require fewer antibiotics and deliver improved productivity-a win for both animals and farmers.

Veterinary telemedicine has proven particularly valuable tool in remote regions with limited access to veterinary services. This technology bridges geographical gaps, allowing veterinarians to provide expert consultation, diagnose conditions, and recommend treatments remotely, ensuring quality veterinary care reaches all corners of our country.

#### Information Management Challenges

Accepting these technological advances, we need to address current challenges in science and technology information management.

Data privacy and security concerns have intensified as we collect more sensitive information all along through digital platforms. Livestock breeding information, farm management and health records required robust protection from cyber threats. Our commitment to ethical standards in data management remains paramount importance.

The data explosion presents both opportunity and challenges. Effective information management systems are essential to analyse and interpret this wealth of data into actionable planning. We must develop interoperable systems that facilitate seamless information flow between stakeholders across the value chain.

Capacity building on data management is now more critical. As technologies evolve rapidly, continuing education and training for veterinarians, farmers, and other stakeholders must keep addressed. Information management systems should prioritize accessibility, particularly in rural and underserved areas where technological literacy may vary.

Ethical considerations must guide our technological adoption. As we implement advanced technologies like gene editing and AI, we must carefully evaluate their impact on animal health, environmental sustainability, and food safety. The veterinary community have to lead these discussions, ensuring responsible path.

#### **Looking Forward**

The integration of new need-based technologies and effective information management systems offers tremendous potential for transforming veterinary practice and livestock management system. Through well-planned application of these tools, we can address the growing global demand for animal products while upholding our commitment to animal welfare and environmental sustainability.

As we navigate this technological landscape, NAVS(I) remains committed to support our members with necessary resources, training, and platforms for knowledge exchange. Together, we can harness these innovations to elevate our profession and contribute meaningfully to India's agricultural future.

We warmly invite your contributions and insights for future newsletters. Please share your thoughts at: ldsinglanavs@gmail.com or ldsingla@gmail.com. Together, let us elevate the vibrant spirit of NAVS NEWS VIBES and propel our profession to new heights.

With warm regards and best wishes,

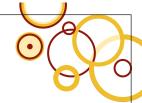
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L.D. Singla

Editor, NAVS NEWS VIBES

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# HORIZON PRESIDENT'S VIEWS & VISION

#### Presidential Address at Academy's 22nd Annual Convocation cum Scientific Convention

Dr DVR Prakash Rao, President, National Academy of Veterinary Sciences (India) delivered presidential address at the XXII Convocation cum Scientific Convention jointly organized by Karnataka Veterinary Animal and Fisheries Science University and the Academy at Bengaluru, March 8-9, 2025. Honourable Shri K Venkatesh ji, Minister of Animal Husbandry, Government of Karnataka, Hon'ble Vice Chancellor of KVAFSU, Distinguished Governing Council members, Revered fellows of NAVS (I), Eminent Scientists, Distinguished guests, Ladies, and Gentlemen....

#### Good Morning & Namaskar!

It is with profound gratitude and humility that I stand before this distinguished assembly on the auspicious occasion of our  $22^{nd}$  Convocation cum Scientific Convention. First and foremost, I extend my heartfelt appreciation to Hon'ble Vice Chancellor Dr KC Veerana and his dedicated team for their exceptional hospitality and meticulous organization of this significant event.

The National Academy of Veterinary Sciences (India) stands as the crown jewel of our profession-a vibrant collective of the nation's finest veterinary minds and a definitive "THINK TANK" for our discipline. Our Academy has consistently illuminated the path forward through pioneering research, strategic policy advocacy, and fostering scientific collaborations that transcend boundaries. We provide authoritative counsel to policymakers on critical matters concerning livestock and poultry sector, and we champion cutting-edge research in disease control, nutrition, and biotechnology. Through gatherings of intellectual significance such as this convention, we empower veterinarians, researchers, and policymakers to confront emerging challenges with innovation and resolve.





#### Our Critical Mission in a Changing World

In an era where global food systems face unprecedented pressures, the livestock and poultry sectors have emerged as linchpins for addressing the nutritional demands of our burgeoning population. As guardians of animal health care, we shoulder the profound responsibility of navigating these complexities while ensuring our practices remain sustainable, ethical, and beneficial to society at large. The transformation of the livestock sector in recent decades has been nothing short of revolutionary, capturing worldwide attention while simultaneously placing increasing strain on our ecosystems and natural resources. It is a testament to our sector's importance that animal products provide 2.15 times more protein for human consumption than plant sources on an equivalency basis. Yet, despite this remarkable contribution toward reducing protein malnutrition, we face formidable challenges in optimizing increased productivity.

#### Confronting Our Most Pressing Challenges

- 1. Environmental Stewardship: We stand at a pivotal crossroads that demands we reimagine the future of livestock and poultry systems amid unprecedented global transformation. Our planet warms, biodiversity diminishes, and resources deplete while humanity's demand for animal-sourced protein grows at an extraordinary pace. The sobering reality that livestock systems contribute 14.5% of global greenhouse gas emissions calls for profound introspection and decisive action. We must embrace and champion sustainable practices that minimize waste and significantly reduce our sector's carbon footprint.
- Vigilant Disease Management: Our industries face persistent threats from emerging microbial and viral disease outbreaks that inflict substantial economic losses while endangering human health and disrupting global trade. Developing robust disease surveillance networks and implementing effective control measures has never been more critical to our collective future.

- 3. Combating Antimicrobial Resistance: Antimicrobial resistance represents perhaps the most urgent global health crisis of our time-a silent pandemic where microorganisms develop formidable resistance to antimicrobial drugs due to injudicious use across medical, agricultural, and veterinary domains. We must champion the responsible use of antibiotics while investing in alternative, innovative strategies for disease prevention.
- 4. Revolutionizing Feed and Nutrition: Erratic weather patterns and increasing drought frequency directly impact the availability of forage and essential feedstuffs. Our path forward must include harnessing drought-resistant forages, exploring the potential of seaweeds, and developing single-cell algae protein to complement traditional diets. The utilization of non-conventional feeds and agro-industrial byproducts must accelerate dramatically.

Our true challenge lies in comprehensively understanding the nutritional profiles, digestibility factors, and health impacts of these alternative feed materials. Transformative technologies-including advanced fermentation processes and enzyme treatments-are already converting low-quality feed resources into highly digestible, nutrient-rich alternatives.

We must also address persistent challenges such as labour shortages and evolving consumer preferences. Today's consumers increasingly demand sustainable and ethically produced animal products-a shift that presents challenges and unprecedented opportunities for producers willing to adapt and innovate.

#### Strategic Priorities for Optimal Production

- 1. **Policy Governance:** Robust policy frameworks are essential to support sustainable livestock farming practices, regulate antibiotic usage, and safeguard animal health across the production spectrum.
- 2. Embracing Innovation and Technology: By strategically



leveraging technologies such as precision agriculture and genomics, we can dramatically improve efficiency, reduce environmental impact, and enhance disease management capabilities. Artificial intelligence-driven feed optimization tools now enable precise diet formulation that improves efficiency while reducing waste. Concurrent advances in nutrigenomics allow us to tailor nutritional strategies that align perfectly with genetic predispositions.

- 3. Empowering Smallholder Integration: The integration of small-scale farmers has proven remarkably successful, particularly in India's broiler farming sector. This integration remains vital for equitable development, ensuring that the benefits of improved technology and market access reach all segments of society.
- 4. Advancing Pet Healthcare and Nutrition: The pet industry experiences explosive growth driven by rapid urbanization, creating urgent demand for scientific approaches to pet care and nutrition. Emerging trends include customised nutrition protocols, advanced diagnostics, and preventive healthcare strategies. Ethical practices and meaningful consumer engagement will remain central to meet these evolving demands

#### A Call to Collaborative Action

The challenges we face are multifaceted and demand a comprehensive, unified approach. As veterinarians, we hold a critical role in addressing these challenges through innovation, collaboration, and unwavering commitment to sustainable practices. I urge each of you to join in this noble endeavor to work together to ensure a healthier, more sustainable future for all.

It is imperative that we cultivate a truly multidisciplinary approach, bringing together experts from diverse fields to collectively tackle the challenges before us. This collaborative spirit will foster holistic solutions that address the intricate interplay between animal nutrition, health, and global food production.

In our relentless pursuit of innovation, we must never lose sight of the ethical dimensions inherent in our decisions. Compassionate and responsible practices must guide our every advancement, ensuring that our innovations contribute not only to productivity but also fundamentally enhance animal welfare.

#### NAVS(I): Charting the Path Forward

The National Academy of Veterinary Sciences (India) remains steadfastly dedicated to driving advancements in veterinary sciences with unwavering focus on sustainability, innovation, and inclusivity. As President, I pledge my full commitment to foster collaborations across disciplines and geographies to address these challenges holistically.

Moving forward, I propose three strategic priorities:

- 1. Strengthen interdisciplinary research that bridges the critical gaps between genetics, nutrition, and animal health
- Accelerate the adoption of innovative technologies at the grassroots level
- 3. Focus on building resilient livestock systems that align seamlessly with the Sustainable Development Goals

In closing, I urge all present (scientists, policymakers, and industry leaders) to unite in creating a future where livestock production stands not only as a model of sustainability but as a beacon of hope for food and nutritional security in our rapidly changing climate.

(Dr DVR Prakash Rao)

#### THE ACADEMY

EVENTS & ENDEAVOURS

#### National Scientific Convention and XXII NAVS Convocation Brings Together Veterinary Experts to Shape Future Priorities

A two-day XXII National Convocation combined with the National Scientific Convention on "Challenges and Priorities for Optimal Production of Livestock, Poultry, Healthcare and Nutrition of Pets" jointly organized by Karnataka Veterinary Animal and Fisheries Sciences University and National Academy of Veterinary Sciences (India) was inaugurated on March 8th, 2025. The chief guest of the inaugural function was Hon'ble Shri K Venkatesh ji, Minister of Animal Husbandry, Government of Karnataka. The function was presided over by Dr DVR Prakash Rao, President, NAVS(I).



The prestigious event brought together 245 delegates from across the country, including Vice Chancellors, DDG (Animal Sciences), DG (RVC), Governing Council Members of NAVS, Deans, Directors, Former Secretaries & AH Commissioners, ICAR Scientists, PhD Scholars, and practicing veterinarians.

### Hon'ble Minister of Animal Husbandry released NAVS News Vibes

During the inaugural function, Shri K Venkatesh ji, Hon'ble Minister of Animal Husbandry, Government of Karnataka, released the newsletter "NAVS News Vibes". This vital publication serves as the voice of the National Academy of Veterinary Sciences (India), providing a platform for knowledge dissemination across the veterinary community.



With diverse sections including Editor's Desk, President's Vision, Events & Endeavours, topic-focused features, Shining Veterinarians, and Academic Connections, the newsletter bridges crucial information gaps and highlights pressing issues in veterinary sciences, reinforcing NAVS's commitment to advancing animal production, health and welfare in India.



#### **Event Structure and Participation**

The two-day convention featured six comprehensive technical sessions addressing critical areas in veterinary and animal science. Eight renowned invited speakers delivered insightful presentations on topics aligned with the convention theme, while 45 carefully selected panelists contributed valuable perspectives and supplementary information. The sessions fostered vibrant discussions and meaningful exchange of ideas among participants.

#### **Technical Sessions Overview**

The convention featured six comprehensive technical sessions covering crucial aspects of veterinary sciences:

• Technical Session I: Progress and Perspectives of Livestock Mission -This session explored sustainable livestock farming practices, infrastructure development for cold storage and processing units, and marketing systems to ensure fair returns for farmers. Discussions emphasized the need for sector-wise brainstorming to address challenges in the livestock value chain.



- Technical Session II: Pet Nutrition and Health This session highlighted the emerging science of personalized nutrition, management for pets and exploring how microbiome management contributes to immune homeostasis. Experts discussed advanced veterinary practices including critical care management, surveillance of infectious diseases, AI-assisted diagnostics, minimally invasive surgeries, and effective pet clientele management strategies.
- Technical Session III: Livestock Production and Health Deliberations covered long-term strategies for enhancing livestock production through improved animal nutrition and genetic selection, with special focus on climate change mitigation. Disease management discussions included data-driven approaches using AI and machine learning for disease forecasting, along with targeted strategies for PPR eradication, FMD control, and responsible antibiotic usage.



Technical Session IV: Poultry Production and Health - This
session addressed critical challenges in the poultry sector, with
emphasis on regulations for waste management institutional,
standards for export-quality production, the development of
protocols for residue-free poultry products, and the utilization
of renewable energy. Experts highlighted the priority need for
boosting AI and coccidiosis vaccine production.

- Technical Session V: Veterinary Education Perhaps the most impactful session, it identified key challenges including shortage of qualified staff and limited funding for veterinary education. This session proposed establishing a Central Veterinary University with six National Institutes across the country, supported by a core fund of ₹25 crores for each recognized veterinary college under Animal Husbandry Infrastructure Development fund. The formation of an Indian Council for Veterinary, Fisheries and Dairy Sciences Research is strongly advocated.
- Technical Session VI: Perspectives for Viksit Bharat 2047
   This forward-looking session positioned the veterinary and animal husbandry sector within India's vision for 2047.
   Discussions centered on enhancing awareness among policymakers about the sector's importance, improving cross-sector collaboration, prioritizing per-animal productivity enhancement, and exploring the renaming of NAVS to better reflect its comprehensive scope and role.



#### **Looking Forward**

The deliberations resulted in numerous actionable recommendations directed to appropriate authorities including the Department of Animal Husbandry & Dairying (DAHD), ICAR Animal Science Division, professional associations, and NAVS itself. The Academy is establishing Core and Working Committees to follow up on these recommendations, with quarterly progress assessments planned.

The next XXIII National Convention cum Convocation is proposed to be held at Bihar Animal Sciences University, Patna, where the progress on implementing current recommendations will be reviewed.

The complete set of recommendations from each session is available at the NAVS(I) website https://navsindia.org/.

# Strengthening India's Veterinary Sciences: President Calls for Collaboration, Innovation, and Strategic Support

At the concluding session of the XXII Convocation cum Scientific Convention of Karnataka Veterinary Animal and Fisheries Sciences University, Bengaluru, on March 9, 2025, Dr DVR Prakash Rao, President of the National Academy of Veterinary Sciences (India), underscored the urgent need to strengthen India's veterinary and animal sciences through sustained collaboration and innovation.





He reflected on the extensive deliberations that had taken place on the productivity and health of livestock, poultry, and companion animals, emphasizing the pivotal role of the National Academy of Veterinary Sciences (India)-our nation's foremost think tank for the veterinary profession. NAVS(I) continues to lead policy advocacy, scientific research, and capacity-building programs aimed at empowering India's vital livestock sector.

He articulated the Academy's mission as one rooted in evidence-based guidance, transformative innovation, and strategic recommendations that directly uplift animal health, nutrition, and productivity across the country. At its core, the Academy is powered by an exceptional cadre of senior scientific mindsmentors and experts who train and inspire the next generation of leaders in education, research, extension, and enterprise within the animal production and health domain.

Through its workshops, seminars, and influential publications, the Academy consistently drives the flow of knowledge to veterinarians, farmers, and the industry. It's One Health initiatives, particularly those targeting zoonotic diseases, serve to reinforce national food safety standards-protecting both human and animal well-being. This comprehensive expertise positions NAVS(I) as a natural partner to the Department of Animal Husbandry and Dairying-advancing research, bolstering farmer training, nurturing startups, and strengthening policy development aligned with our Hon'ble Prime Minister's vision for rural prosperity and inclusive economic growth.

Among the notable achievements this year, Dr Rao highlighted two significant workshops focused on the safe disposal of fallen livestock carcasses-an ecological challenge that calls for urgent and innovative intervention. Another landmark workshop addressed the processing and productive utilization of animal industry byproducts, converting what was once waste into high-value protein feed for poultry and aquaculture.

Dr Rao shared his satisfaction at the successful upskilling of around 40 field veterinarians, supported by GADVASU, Ludhiana. Another 40 are set to undergo training at TANUVAS, Chennai, before the end of March 2025. These vital programs-made possible through the support of M/s Brooke India and the respective universities-demonstrate the power of partnerships in driving sector-wide progress. He extended heartfelt gratitude to all supporting organizations for their invaluable contributions.

Acknowledging these successes, Dr Rao candidly addressed a pressing concern-the financial constraints under which the Academy operates. Much of NAVS(I)'s work is sustained through external support from corporate partners, NGOs, and veterinary institutions. He earnestly appealed to the Ministry of Animal Husbandry for dedicated financial backing, stressing that such support would dramatically amplify the Academy's reach, equipping farmers with advanced knowledge and tools to improve

production and income from meat, milk, and eggs.

He pointed out that these productivity gains would not only uplift farmer livelihoods but also contribute meaningfully to national GDP growth and the Government's priority of doubling farmers' incomes. By integrating NAVS(I) into national missions like the National Livestock Mission, Rashtriya Gokul Mission, and disease control initiatives through a structured funding mechanism, the Academy could significantly strengthen implementation and bridge critical knowledge gaps.

In conclusion, Dr Rao urged the Ministry to recognize and support the Academy as a strategic ally. Strengthening NAVS(I) will yield far-reaching benefits-empowering rural communities, generating sustainable employment, and positioning India as a global leader in veterinary excellence and livestock production. A united effort, he emphasized, would pave the way for a development model grounded in productivity, animal welfare, and environmental stewardship.

#### 9th Governing Council Meeting of the Academy

The 9<sup>th</sup> Governing Council (GC) Meeting of the National Academy of Veterinary Sciences (India) [NAVS (I)] was convened on 8<sup>th</sup> March 2025 at 08:30 AM at the Karnataka Veterinary, Animal & Fisheries Sciences University, Hebbal, Bengaluru.

Dr DVR Prakash Rao, President, NAVS (I), warmly welcomed all GC members, including Ex-Officio Member Maj Gen Devender Kumar, VSM, and special invitees Maj Gen Shri Kant SM, VSM (Retd), Past President NAVS (I); Prof KML Pathak, Former DDG (ICAR) and President NAVS (I); and Prof Suresh S Honnappagol, Former Animal Husbandry Commissioner, Government of India.



#### Progress on Pending Points from the Previous GC Meeting

- 1. Establishment of NAVS (I) Zonal/Regional Chapters: The proposal to establish Zonal/Regional Chapters to strengthen the Academy's outreach and support was discussed. It was decided that a committee would be constituted to explore the feasibility and resource requirements for setting up such chapters.
- 2. **Denial of Income Tax Exemption:** The Chartered Accountant (CA) had earlier informed the Council during the GC meeting on 31<sup>st</sup> January 2025 that the Income Tax (IT) Department declined to grant tax exemption to NAVS (I), citing non-fulfilment of the criteria for a charitable organization. The Academy has been asked to refile Income Tax Returns for FY 2022-23 and 2023-24. The revised returns have since been submitted. The Secretary General informed the Council that it is essential to approach the IT authorities to justify the Academy's status as a charitable institution. The



Treasurer and Secretary General will follow up the case with the CA and relevant authorities.

#### **Agenda Points**

- 1. Publication of Periodicals/Journals/Technical Books: It was resolved to upgrade the existing NAVS (I) Newsletter to a peer-reviewed journal. A committee will be formed to draft submission guidelines for technical articles and recommend necessary resources.
- 2. Review of Government Policies on Animal Health, Welfare, and Production: It was agreed that NAVS (I) should organize brainstorming sessions to critically evaluate and recommend revisions to existing government policies in these sectors.
- 3. Recognition of NAVS (I) Fellowships in Selections/
  Promotions: A letter will be sent to Vice-Chancellors of all
  Veterinary Universities urging them to consider NAVS (I)
  Fellowships as a criterion for promotions and selections.
- **4. Corporate-Academia Collaboration:** A committee will be constituted to develop a partnership model engaging corporates, farmers, and associates with shared interests in veterinary and animal sciences.
- 5. Collaboration with Veterinary Associations: The President will initiate communication with various veterinary associations to seek collaborative engagements with NAVS (I).
- 6. Promotion of Continuing Veterinary Education (CVE): It was resolved to form a committee to draft a proposal seeking financial support from the Department of Animal Husbandry & Dairying (DAHD), Government of India, and other relevant national/international bodies for organizing CVE programs.
- 7. Formulation of the Academy's Vision Document: A committee will be formed to develop a strategic roadmap for the establishment of the Indian Council of Veterinary Research (ICVR), aligning with the Academy's long-term vision.

#### Any Other Points with the Permission of the Chair

 Maj Gen Devender Kumar, VSM, Officiating DGRVS, offered to host the next Governing Council Meeting at RVC Centre and College, Meerut during the next quarter.

#### 10th General Body Meeting of the Academy

The 10<sup>th</sup> General Body (GB) Meeting of the National Academy of Veterinary Sciences (India) [NAVS (I)] was convened on 8<sup>th</sup> March 2025 at 11:30 AM at the Karnataka Veterinary, Animal & Fisheries Sciences University, Hebbal, Bengaluru. The detailed minutes have been uploaded on the NAVS (I) website: http://www.navsindia.org. A summary of the salient points discussed during the meeting is as follows:

Dr DVR Prakash Rao, President, welcomed the Fellows and expressed his gratitude for their presence. He apprised the house of the significant achievements of the Academy during the past year. The Secretary General presented the Annual Report along with the up-to-date Financial Statement, including the Audited Report of the Academy.



The minutes of the 9<sup>th</sup> General Body Meeting (GBM), held on 1st July 2023 at 2:30 PM at Guru Angad Dev Veterinary and Animal Sciences University (GADVASU), Ludhiana (Punjab), were read out and confirmed.

#### 1. Progress on Pending Items from the Previous GB Meeting:

(a) Role of NAVS (I) in Continuous Veterinary Education (CVE) and Establishment of a "Veterinary Extension Research Institute" at DMS Complex, New Delhi: The President informed the house that, based on the concept notes received from the GC members, a proposal was submitted to Shri ParshottamRupala, Hon'ble Cabinet Minister of Fisheries, Animal Husbandry and Dairying, for financial support to engage NAVS (I) experts in CVE training programs. After discussions with the President, the Hon'ble Minister emphasized prioritizing the establishment of the Indian Council of Veterinary Research (ICVR). The President subsequently submitted a detailed note on the subject. The matter now needs to be taken up with the newly appointed Cabinet Minister.

**(b) Joint Activities in Collaboration with Other Organizations/ Institutions:** Following the Joint Seminar with Brooke India on 28<sup>th</sup> April 2023, two short-term courses titled "Livestock Health, Issues and Possible Solutions" were conducted at GADVASU, Ludhiana in August 2024 and January 2025, for 20 field veterinarians nominated by the Director, Animal Husbandry Department, Government of Punjab. These were sponsored by Brooke India.On similar lines two short-term courses have been planned with Tamil Nadu Veterinary and Animal Sciences University (TANUVAS), Chennai for March 2025.

#### 2. Agenda Items for Ratification by the GB:

(a) Nomination of Patrons of NAVS (I): As resolved in the 9<sup>th</sup> GBM, the Hon'ble Cabinet Minister Shri ParshottamRupala was invited to be a Patron of the Academy via a letter dated 5th February 2024. His consent was received via the Ministry's email on 21<sup>st</sup> March 2024. Subsequently, during the EC meeting on 28<sup>th</sup> May 2024, Dr KM Bujarbaruah was also nominated and accepted the Patronship on 23<sup>rd</sup> July 2024. With the appointment of a new Cabinet Minister, the Academy will extend an invitation for Patronship accordingly.

**(b) Appointment of Maj Gen Shri Kant SM, VSM (Retd) as Past President:** The President proposed that Maj Gen Shri Kant SM, VSM (Retd) continue as Past President. The Governing Council approved the proposal.

- **(c) Nomination of Editorial Board:** The President commended Dr LD Singla, Editor, for his contributions to the NAVS (I) Newsletter. On his recommendation, the Editorial Board was constituted as follows:
- Editor: Dr LD Singla
- *Members:* Dr Jyoti Palod, Dr Ashwani Kumar, Dr D Thyagarajan, and Dr Tapan Kumar Dutta

#### (d) Honours/Awards:

#### (i) Fellowship/Associate Fellowship/Membership Awards:

- Fellowship: 20 out of 44 applicants qualified
- Associate Fellowship: 11 out of 13 applicants qualified
- Membership: 25 out of 25 applicants qualified

#### (ii) Academy Awards (as approved by GC):

- Dr CM Singh Award: Dr SK Ranjhan
- Dr DVR Prakash Rao Lifetime Achievement Award cum Late Smt.
   Sundari Prakash Rao Memorial Endowment Lecture: Dr Khageswar Pradhan
- Dr RK Sharma Memorial Award for Excellence in Veterinary Extension Education: Dr Jaswinder Singh
- Dr KK Baxi Outstanding Scientist Award: Dr Baljinder Kumar
  Bansal
- Young Scientist Award: Dr Rajib Deb
- **(e) Financial Statements:** The financial statement was presented and approved

#### 3. Information Points:

- (a) NAVS (I) Election 2024-26: Elections were held on 30<sup>th</sup> November 2023. Results for President, Vice President, Secretary General, Treasurer, and GC members were shared.
- **(b) Website Management:** Dr YPS Malik was nominated and approved as the Coordinator for the NAVS (I) website.
- (c) Establishment of ICVR: In line with the Prime Minister's vision of a developed India by 2047, the Academy will formulate a vision document titled "Amrit Kaal 2047". A committee was formed to review government policies on veterinary education, research (including ICVR), production, and extension activities. During the committee's online meeting on 27<sup>th</sup> May 2024, it was recommended to establish sub-committees to address key areas such as education, dairy and poultry production, meat technology, waste management, and emerging technologies in animal production.
- (d) Indo-German Collaboration: The Science & Technical Wing of the Indian Embassy facilitated an Indo-German dialogue on veterinary collaboration. An online meeting on 19th July 2024 included representatives from NAVS (I), ICAR, IVRI, NDRI, TANUVAS, GADVASU, and West Bengal Veterinary institutions.
- **(e)** Joint Seminars with Brooke India: Seminars were conducted on:
- Best Practices for Disposal of Carcasses" (January 2024)
- Commercial Utilization of Carcasses to Safeguard One Health" (March 2024)

Recommendations are available on the Academy website.

#### 4. Any Other Matters with the Permission of the Chair:

- (a) Recognition of Fellowship: Dr Mandeep Sharma, Vice Chancellor, NDVSU, Jabalpur, suggested that the Academy pursue recognition of its Fellowship by concerned authorities. The President agreed and proposed writing to all VCs to allocate weightage for NAVS (I) Fellowships during promotions and selections.
- **(b)** Representation from Industry/Corporate Sectors: Dr Raghvendra Bhatta, DDG (AS), ICAR, suggested considering membership for distinguished veterinarians from industry. The proposal will be presented to the GC.
- **(c)** Institutional Membership Appeal: The President urged the Vice Chancellors of the remaining three Veterinary Universities (Jabalpur, Hyderabad, Kolkata) to join as Institutional Members.
- **(d) Coding/Numbering of Certificates:** The proposal to codify and number the Academy's certificates was accepted.
- **(e)** Eligibility Criteria for Associate Fellowship: A proposal was made to reduce the required tenure as Associate Professor from 5 years to 3 years for Associate Fellowship eligibility. The matter will be referred to the GC for deliberation.

#### 3<sup>rd</sup> Executive Committee Meeting of the Academy

The 3<sup>rd</sup> Executive Committee Meeting of the National Academy of Veterinary Sciences (India) [NAVS (I)] was held online on 25<sup>rh</sup> March 2025 at 9:00 PM. Dr DVR Prakash Rao, President, welcomed the Executive Committee members and expressed his gratitude for their participation despite the short notice.

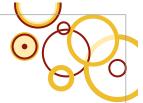
Maj Gen ML Sharma (Retd.), Secretary General, informed the Committee that the primary agenda item for the meeting was to consider an extension of the deadline for the receipt of applications for various Academy awards. He apprised the members that, as of 25<sup>th</sup> March 2025, only 30 applications had been received.

Regarding the timeline for the upcoming Convocation, Dr Inderjeet Singh, Hon'ble Vice Chancellor of Bihar Animal Sciences University, Patna, conveyed to the President that October 2025 would be a suitable period for organizing the Convocation-cum-Scientific Convention.

In light of this, it was proposed to extend the deadline for receipt of applications for the Academy Awards to 30<sup>th</sup> June 2025. This extension would allow sufficient time for evaluation and documentation processes.

Additionally, it was suggested that communications be sent to the Vice Chancellors of various Veterinary and Agricultural Universities, the Director General of RVS, the Deputy Director General of ICAR, and the President of the Veterinary Council of India (VCI) to raise awareness about the Academy awards.

The President approved the extension of the deadline for submission of award applications to 30<sup>th</sup> June 2025 and stated that he would personally write to the concerned authorities to encourage potential candidates to apply.



### **IN FOCUS:**

#### Epigenetics: A Strategic Key to Building Resilience and Sustainability in Livestock Amid Climate Change







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The global demand for high-quality animal-derived food is rising rapidly, driven by a growing population and increasing affluence. However, this surge in demand comes at a time when climate change poses an unprecedented challenge to livestock production systems. Extreme weather events, rising temperatures, and fluctuating resource availability threaten livestock productivity and food security. As we strive to meet these challenges, the focus must shift toward sustainable solutions that enhance both productivity and environmental stewardship.

In this context, epigenetics presents an extraordinary opportunity. This field offers new insights into the subtle but powerful ways in which environmental factors influence gene expression, guiding the development of livestock that are not only more productive but also more resilient to the stresses of a changing climate. By tapping into epigenetic mechanisms, we can unlock the potential to strengthen animal health, growth, and efficiency without altering the DNA sequence itself.



#### Epigenetics: A Catalyst for Livestock Adaptation

Epigenetics refers to heritable changes in gene expression that do not alter the underlying DNA sequence. These changes are driven by molecular modifications like DNA methylation, histone modifications, and non-coding RNA interactions. They act as a bridge between an animal's genetic potential and the

environmental factors it encounters, allowing for flexible, adaptive responses to changing conditions.

The power of epigenetics lies in its ability to provide livestock with a dynamic toolkit to adapt to stressors such as heat, nutritional changes, and even altitude. Unlike genetic changes, epigenetic alterations can occur quickly and can be passed down to future generations, potentially offering a rapid way to enhance resilience in response to environmental challenges.

#### **Epigenetic Mechanisms That Support Climate Resilience**

As climate change accelerates, understanding the role of epigenetics in helping livestock adapt becomes critical. Environmental stressors, such as heat, poor nutrition, and disease, are known to impact livestock productivity, and epigenetic modifications offer potential solutions for improving adaptability. Here's how:

- Heat Stress Adaptation: Heat stress is one of the most significant challenges facing livestock in warmer climates. Epigenetic changes, such as DNA methylation and histone modifications, regulate the expression of heat shock proteins (HSPs), which protect cells from thermal damage. Research has shown that epigenetic regulation of key heat shock proteins like HSP70 and HSP90 can improve thermotolerance in cattle and poultry, helping them cope with extreme heat.
- Nutritional Epigenetics: The availability of nutrients is directly linked to epigenetic modifications that regulate metabolism, immune responses, and overall health. Nutrients like folate and betaine influence DNA methylation patterns, which can affect growth performance and feed efficiency. By understanding these mechanisms, we can optimize nutrition to enhance productivity and resilience in livestock.
- **Altitude and Hypoxia Adaptation:** Livestock at high altitudes face challenges like lower oxygen levels. Epigenetic modifications regulate genes involved in oxygen transport and energy metabolism, supporting the adaptation of animals to hypoxic conditions. In species such as Tibetan pigs and plateau ruminants, DNA methylation patterns in key genes like HIF- $1\alpha$  are crucial for survival in low-oxygen environments.
- Disease Resistance: Epigenetic changes also play a significant role in disease resistance. By modulating immune-related genes, epigenetic mechanisms enhance an animal's ability to resist infections. Histone modifications, for example, can influence macrophage activity and cytokine productioncritical components of the immune system's innate response to pathogens.

#### **DISCLAIMER**

The views expressed by various authors in this publication are their own and not necessarily that of the NAVS(I). Further, news items related to selected scientific and academic advances published in this newsletter are extracted from varied sources, including scientific journals, newspapers, websites etc. They are solely meant for developing educational awareness among the members of the Academy.

#### $Harnessing\,Epigenetics\,for\,Sustainable\,Livestock\,Management$

The potential applications of epigenetics in livestock management are both profound and practical. By incorporating epigenetic insights, we can develop more robust and sustainable systems that not only meet the growing demand for animal products but also support the long-term health of our ecosystems. Some key opportunities include:

- 1. **Precision Breeding:** Integrating epigenetic markers into breeding programs can enhance selection for stress resilience, disease resistance, and productivity traits that are essential for a changing climate.
- 2. Nutritional Interventions: Tailored dietary strategies can modulate epigenetic pathways, optimizing growth, reproduction, and immune responses in livestock. This approach could be key to reducing reliance on pharmaceuticals and boosting productivity through natural means
- 3. Environmental Adaptation Strategies: Epigenetic profiling could help identify livestock breeds that are particularly well-suited to harsh climates, supporting the development of climate-smart farming systems that are resilient and resource-efficient.
- **4. Disease Control:** By identifying epigenetic biomarkers of infection susceptibility, we can develop better disease surveillance tools and enhance vaccine efficacy, safeguarding the health of livestock populations worldwide.

#### Road Ahead: Research and Innovation in Epigenetics

While epigenetics holds immense promise, its practical application in livestock breeding and management is still in its early stages. To realize its full potential, further research is needed in several key areas:

- Decoding the species-specific epigenetic regulatory networks that influence production traits.
- Developing cost-effective methodologies for large-scale epigenome-wide association studies.
- Investigating the transgenerational inheritance of epigenetic modifications and their implications for livestock adaptation.
- Integrating epigenetic insights with genomic selection to create more holistic, future-proof breeding strategies.

#### **INSTITUTIONAL LIFE MEMBERS (NGO)**





#### **CORPORATE LIFE MEMBERS**









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#### FOOD FOR THOUGHT:

LIVESTOCK HEALTH AND WELFARE

# DAHD's Republic Day Tableau Highlights Indigenous Cattle as Icons of Rural Prosperity

For the first time in its history, the Department of Animal Husbandry and Dairying (DAHD) participated in the 76<sup>th</sup> Republic Day Parade with a captivating tableau themed "Honouring India's Indigenous Cattle Breeds as Icons of Sustainable Rural Growth." The tableau received widespread applause and echoed with the chant "Gau MaiyyaTujhe Pranam...", emphasizing the reverence for India's indigenous cattle and their vital role in the country's rural economy.

The tableau depicted India's leadership in milk production, showcasing a grand milk can symbolizing the nation's status as the world's largest milk producer, with a per capita availability of 471 grams per day in 2023-24. At the rear, a life-size Kamadhenu and Pandharpuri buffalo honored the cultural and economic significance of India's indigenous breeds.



It also highlighted women dairy farmers and rural communities as key drivers of economic empowerment and sustainable livelihoods. Innovative technology like the "Bharat Pashudhan" app and FMD vaccination campaign for a FMD Mukt Bharat were featured, alongside ghee traceability to enhance product quality and consumer trust.

In an exciting nod to innovation, the tableau included Bio-CNG-powered "Milko-Bikes" for efficient milk transportation, representing a sustainable solution for rural milk collection.

This participation celebrated India's indigenous cattle heritage and showcased the DAHD's commitment to sustainable, techenabled rural growth.

### **Revolutionary Partnership Transforms India's Animal Health Sector!**

In a landmark initiative, the Department of Animal Husbandry & Dairying (DAHD) partnered with the World Organization for Animal Health (WOAH) and hosted a transformative workshop in New Delhi from February 11-13, 2025. This pivotal event brought together over 100 stakeholders to forge a revolutionary path for India's veterinary services through strategic public-private partnerships.

The high-impact workshop targeted critical gaps in India's animal health infrastructure, focusing on four game-changing areas:

- Establishing NABL-accredited veterinary laboratories at district levels to dramatically enhance diagnostic capabilities
- Creating Foot-and-Mouth Disease-Free Zones to protect livestock and boost agricultural productivity





- Building a skilled veterinary workforce through intensive training programs
- Achieving self-reliance in vaccine production through an advanced vaccine value chain

Ms Alka Upadhyaya, Secretary of DAHD, highlighted the vital importance of the livestock sector, which contributes over 30% to India's Agricultural Gross Value Added. She called for the immediate development of a structured PPP policy within the year to ensure substantial investment and sustainable private sector engagement."This workshop has created a powerful platform for



structured PPP engagement in veterinary services," declared Ms Upadhyaya. "These discussions will lead to a comprehensive roadmap that transforms our national disease control programs and ensures absolute animal health security."

Dr Hirofumi Kugita, WOAH Regional Representative, praised India's leadership, emphasizing its potential to drive global veterinary excellence. Meanwhile, Dr Abhijit Mitra, Animal Husbandry Commissioner, underscored the urgent need for an institutional framework where public and private sectors collaborate to rapidly scale up veterinary services.

#### ICAR-NBAGR Registers eight Livestock and Poultry Breeds

The ICAR-National Bureau of Animal Genetic Resources (NBAGR), Karnal, has officially registered eight new breeds of livestock and poultry, including seven indigenous breeds, based on recommendations from the Breed Registration Committee. Below are the origins and features of the newly registered breeds:

- Aravali chicken: A dual-purpose chicken, reared for both meat and eggs, predominantly found in the Banaskantha, Sabarkantha, Aravalli, and Mahisagar districts of Gujarat.
- Andamani Duck: A dual-purpose duck breed, native to the Nimbudera to Diglipur region of the Andaman and Nicobar Islands. The duck is characterized by its black plumage, accented with white markings under the neck extending to the belly. Adult drakes weigh, on average, 1406 grams, with an annual egg production of 266 eggs.
- Anjori Goat: A medium-sized goat breed primarily raised for meat in the Raipur, Durg, Rajnandgaon, Kanker, Dhamtari, and Mahasamund districts of Chhattisgarh. The breed is predominantly brown in color, hardy, and well adapted to local climatic conditions.
- Andamani Goat: A medium-sized goat, used for meat production, found in the Middle and North Andaman districts of the Andaman and Nicobar Islands. This breed is notably well-suited to the tropical hot-humid climate of the region.
- Bhimthadi Horse: A horse breed indigenous to the Pune, Solapur, Satara, and Ahmadnagar districts of Maharashtra.
   With an average height of 128 cm for mares and 130 cm for stallions, the Bhimthadi horse is primarily employed for

- transporting household goods during the migration of pastoralist communities.
- Andamani Pig: A native pig breed from the Andaman and Nicobar Islands, mainly reared for pork. These pigs are medium-sized, robust, and quick runners, thriving under a low-input management system. The average body weight for adult males is 71 kg, while females weigh around 68 kg.
- Macherla Sheep: A medium to large-sized sheep breed found in the Guntur, Krishna, and Prakasam districts of Andhra Pradesh, as well as in the nearby regions of Telangana. The breed is primarily raised for meat and is characterized by a white coat with large black or brown patches on the body, face, and legs. Adult males typically weigh 43 kg.
- Frieswal Cattle: A synthetic dairy breed developed by the ICAR-Central Institute for Research on Cattle, Meerut, through the crossbreeding of Sahiwal (37.5%) and Holstein Friesian (62.5%). The Frieswal breed is acclimatized to various agro-climatic regions of the country.

With the registration of these eight breeds, the total number of indigenous animal breeds now includes 53 for cattle, 20 for buffalo, 39 for goats, 45 for sheep, 8 for horses and ponies, 9 for camels, 14 for pigs, 3 for donkeys, 3 for dogs, 1 for yak, 20 for chickens, 3 for ducks, and 1 for geese. Notably, the Bureau has also registered the Frieswalis cattle as the first synthetic breed in India.

(Source:https://icar.org.in/icar-nbagr-registered-8-new-livestock-and-poultry-breeds

#### Gaddi Recognized as India's Fourth Indigenous Dog Breed

In a significant development, the Indian Council of Agricultural Research - National Bureau of Animal Genetic Resources (ICAR-NBAGR) has officially recognized the *Gaddi*, an indigenous canine breed native to Himachal Pradesh. Renowned for its exceptional guarding



instincts, this resilient breed plays a crucial role in protecting sheep and goats from predators, primarily leopards.

Named after the Gaddi shepherds of Himachal Pradesh, the breed is also referred to as the *Himalayan Sheepdog* or occasionally the *Himalayan Mastiff.* Possessing a sturdy, muscular frame, the Gaddi is distinguished by its thick black coat, often accented with white markings, which provides insulation against the harsh mountainous climate.

### World Veterinary Day 2025: Celebrating the Power of Teamwork in Animal Health

World Veterinary Day 2025, scheduled for April 26, will spotlight the theme "Animal health takes a team," emphasizing the collaborative nature of the veterinary profession. The World Veterinary Association (WVA) has chosen this theme to underscore the importance of teamwork in delivering optimal animal health care globally.



This year also marks a significant milestone as the American Veterinary Medical Association (AVMA) will cohost the 40th World Veterinary Association Congress (WVAC) alongside the



AVMA Convention in Washington, D.C., from July 18-22. This joint event will bring together the global veterinary community for educational sessions, networking, and special events.

Dr John de Jong, WVA President, stated that veterinary care goes beyond treating pets, highlighting its role in food safety, animal welfare, public health, and more. The collaborative efforts of veterinarians, nurses, technicians, and researchers are vital for advancing animal health worldwide.

World Veterinary Day, initiated in 2000, continues to celebrate veterinarians' contributions to animal, human, and environmental well-being. The event also promotes the prestigious World Veterinary Day Award and the WVA Global Veterinary Awards, recognizing outstanding contributions to veterinary medicine.

#### World Animal Nutrition Conference Emphasizes Importance of Research for Livestock Prodution

The World Animal Nutrition Conference (WANACON-2025), organized by Nagpur Veterinary College, Maharashtra Animal and Fishery Sciences University, Nagpur and Animal Nutition



Association, Izatnagar was held from January 20-22, 2025. Dr Raghavendra Bhatta, Deputy Director General, Animal Science, ICAR, was among the distinguished guests at this prestigious

During the conference, Maharashtra's Cabinet Minister for Animal Husbandry, Environment and Climate Change, Pankaja Munde, highlighted the critical role of optimal nutrition for cattle and urged researchers to work toward improving livestock productivity. She emphasized that livestock, forest conservation, environment, and sustainable lifestyle are invaluable gifts of Indian culture that should be conserved for generations.

Dr Bhatta, a key figure in animal science research, participated alongside other notable attendees including Dr Ramaswamy N, Secretary, Department of Animal Husbandry; Dr Himanshu Pathak, Director General, ICAR; Dr Pravin Kumar Deore, Commissioner, Department of Animal Husbandry, Maharashtra and Dr Niteen Patil, Vice Chancellor, Maharashtra Animal and Fishery Sciences University, Nagpur.

The conference highlighted India's position as a world leader in milk production (ranking first) and egg production (ranking second), highlighting how veterinary science can drive rural development through advancements in livestock management and nutrition research.

#### **Emerging Threat of Avian Influenza in Mammals**

A recent report from the US Centres for Disease Control and Prevention (CDC) highlighted that mammals can become infected with avian influenza H5N1 viruses when they consume infected birds, poultry, or other animals, and/or exposed to contaminated environments. Though rare, mammalian infections have been reported globally in the wake of widespread avian influenza outbreaks among wild birds and poultry.

The first confirmed case of Highly Pathogenic Avian Influenza (HPAI) A(H5N1) in dairy cows was reported last year. This was subsequently followed by the first documented instance of bird flu transmission to a human with direct exposure from dairy cows, suggesting the possibility of mammal-to-human transmission of the HPAI A(H5N1) virus. Currently, 17 U.S. states and approximately 990 infected dairy herds have been reported by the CDC. Globally, sporadic HPAI A(H5N1) virus infections in mammals have been documented across Asia, North America, South America, and Europe. Notably, recent HPAI A(H5N1) infections have also been observed in marine mammals, including sea lions in Peru and Chile, elephant seals in Argentina, and foxes in Canada, France, and several other countries.

(Source: https://www.cdc.gov/bird-flu/situation-summary/ mammals.html)

#### IVF Scientists Create World's First Kangaroo Embryo to Fight **Extinction Crisis**

In a world-first scientific milestone, Australian researchers have successfully created a kangaroo embryo using in vitro fertilization (IVF), marking a major leap forward in the race to save endangered marsupial species. Scientists at the University of Queensland hailed the achievement as a "groundbreaking advancement" with profound implications for wildlife conservation.





scientists involved in the groundbreaking study

Patricio Palacios was one of the Eastern gray kangaroo's genetic material was used for the study, which produced embryos via IVF. Thennicke via Wikimedia Commons under CC BY-SA 4.0

The team used intracytoplasmic sperm injection, a method where a single sperm is directly injected into a mature egg- on reproductive cells taken from deceased eastern grey kangaroos. While this species is not endangered, it provided the ideal model for developing and refining the technique.

"This is not just about kangaroos- it's about safeguarding Australia's entire marsupial heritage," said lead researcher Dr Andres Gambini. The breakthrough could play a vital role in conserving iconic but threatened species like the koala, Tasmanian devil, northern hairy-nosed wombat, and Leadbeater's possum.

Australia is home to the richest diversity of marsupials in the world but also suffers the highest rate of mammal extinctions globally. In response, the Australian government launched a 10year plan in 2022 to protect over 110 priority species and conserve more than 30% of the country's landmass.

[https://www.bbc.com/news/articles/cy9l1w5zlgdo]

#### FDA Approves First Human Trials for Pig Kidney Transplants

In a historic medical advancement, the US Food and Drug Administration has approved the first-ever clinical trials to transplant genetically modified pig kidneys into human patients.



This development could transform the future of organ transplantation.

Two biotechnology firms, United Therapeutics Corporation and eGenesis, have received approval to begin testing these xenotransplants in patients suffering from kidney failure, a condition affecting over 550,000 Americans. Nearly 100,000 people are currently on the transplant waiting list, but less than a quarter received a kidney in 2023. Many wait for years or die before a donor organ becomes available.

Now, science may be closing that gap.

"This marks a transformative era in organ transplantation," said Mike Curtis, CEO of eGenesis. The genetically engineered pigs have undergone extensive gene editing to reduce the risk of organ rejection and eliminate viruses that could potentially infect humans. The eGenesis pigs have 69 edits, while United Therapeutics' pigs have 10, including the addition of six human genes.

### A Season of Animal Celebration: Welfare & Health Calendar (January-March 2025)

#### January 1-7: Starting the Year with Awareness and Adventure

- Polar Bear Plunge Day (Jan 1<sup>st</sup>): n this day, thousands of brave souls dive into freezing water to support wildlife and health causes. It's a bold, fun tradition in chilly countries like the USA, Canada, the Netherlands, the UK, Germany, and Scandinavia.
- National Pet Travel Safety Day (Jan 2<sup>nd</sup>): This day reminds pet owners to properly secure their furry friends when traveling either by car, plane, or train. Celebrated mainly in the USA, its message is spreading worldwide, helping more people travel safely with their pets.
- Happy New Year for Cats Day (Jan 2<sup>nd</sup>): A day to let your cat ponder the possibilities of the New Year and for owners to pamper their feline companion to humorously recognize the feline's royal nature. Mostly celebrated in the U.S., it's winning hearts of cat lovers all around the world.
- National Bird Day (Jan 5<sup>th</sup>): Appreciate avian diversity and conservation efforts. Celebrated mainly in the U.S., but its message is universal.
- National Save the Eagles Day (Jan 10<sup>th</sup>): Focused on raising awareness for the conservation of eagles, especially those that faced near extinction. Observed in the US and Scotland, with global significance
- National Dress Up Your Pet Day (Jan 14th): A fun and fashionable day to showcase your pet's sartorial flair. Pet owners are encouraged to dress their furry friends in adorable outfits and costumes for a light-hearted celebration. It is celebrated in the USA, Japan, Latin America, Thailand and Europe.
- Penguin Awareness Day (Jan 20<sup>th</sup>): Dedicated to raising awareness about penguin species that are facing population decline. Celebrated globally, especially in regions where penguins live.
- National Squirrel Appreciation Day (Jan 21<sup>st</sup>): Recognizes the resilience and charm of squirrels. Notable in the U.S., UK, and Ireland.

• National Answer Your Cat's Questions Day (Jan 22<sup>nd</sup>): A fun excuse to connect with your cat and imagine what they had ask if they could talk. Mostly celebrated in the USA, it's now loved by cat fans in Canada, the UK, Australia, and beyond!

#### January 28: A Trio of Rare & Heartfelt Observances

- World Geoffroy's Cat Day: A day dedicated to Geoffroy's cat, a small wild cat from South America. The day aims to raise awareness for this endangered species and its conservation needs.
- Rattlesnake Roundup Day: This event celebrates the rattlesnake roundup, a tradition in the southwestern US where people capture and handle rattlesnakes, bringing awareness to wildlife management.

#### January 31: Bold Stripes & Wild Suits Day

- International Zebra Day: Promotes global zebra conservation, especially vital in Africa, home to all three zebra species
- National Gorilla Suit Day: A comic-inspired day of fun that sparks conversation about real gorilla conservation. Celebrated mainly in the US.

#### Month-Long Themes (January 2025):

- Winter Wildlife Support: Focuses on minimizing human impact on wildlife and supporting birds and small animals during winter. Primarily active in the USA
- **Pet Health Resolutions:** Encourages vet visits, better diets, dental care, and exercise for pets. Celebrated in the USA.
- Walk Your Dog Month: This day is primarily celebrated in the USA to raise awareness about the mental and physical benefits of walking your dog for health and happiness, especially during winter.

#### February 2025

**Pet Dental Health Month (Month-Long):** A full-month reminder to protect pets from dental disease with regular vet care and good oral hygiene.

- Yukon Quest (Feb 1<sup>st</sup>): An epic sled dog 1000 miles sled dog race celebrating the strength and endurance of mushers and their dogs across the Arctic wilderness, emphasizing tradition, teamwork, and northern heritage. It is primarily celebrated in Alaska, (USA), and Yukon (Canada).
- National Serpent Day (Feb 1st): A day to recognize the symbolic power and mystery of snakes, revered across cultures for wisdom, fear, and fascination. This day is primarily celebrated in the USA, though it has gained international attention.
- National Brown Dog Day (Feb 2<sup>nd</sup>): Celebrated across the USA, this day honors the loyal and lovable brown-coated dogs.
- National Hedgehog Day (Feb 2<sup>nd</sup>): Celebrated in the USA and UK, this day honors hedgehogs' role in folklore, seasonal predictions, and pop culture, tracing back to Roman traditions.
- National Sled Dog Day (Feb 2<sup>nd</sup>): Celebrated in Alaska (USA) and Yukon Quest, Canada, this day honors sled dogs for their historic role in polar exploration and their courage, loyalty, and partnership with humans.



- Marmot Day (Feb 2<sup>nd</sup>): Highlights marmots worldwide, with a special focus on Alaska's unique marmots, raising awareness of their ecological importance and cultural significance.
- **Groundhog Day (Feb 2**<sup>nd</sup>): A beloved North American tradition where a groundhog "predicts" the coming of spring, blending fun, folklore, and meteorology.
- **Doggy Date Night (Feb 3<sup>rd</sup>):** Celebrated locally in the USA, Ireland, and Australia, this fun day encourages spending quality time with dogs, including pup-friendly outings.
- National Golden Retriever Day (Feb 3<sup>rd</sup>): Celebrated widely in North America, the UK, Australia, New Zealand, and Western Europe, this day honors the loyal, intelligent, and loving Golden Retriever breed.
- Feed the Birds Day (Feb 3<sup>rd</sup>): Encourages people to help backyard birds through winter by providing essential food-an act of kindness during National Bird Feeding Month in USA.

#### Month-Long Awareness in February

- National Goat Yoga Month: Promotes stress relief and fitness through a quirky, joyful fusion of yoga and friendly goats-originating from a small farm in Arizona.
- Adopt a Rescued Rabbit Month: Celebrated in the USA and parts of Canada, this month emphasizes adopting rabbits from shelters and promotes responsible care for these sensitive, intelligent pets.
- Humpback Whale Awareness Month: Focuses on the aweinspiring migration and survival of humpback whales and the need to protect their marine habitats in Hawaiian waters, IISA
- National Bird Feeding Month: Celebrated in the USA, this
  month encourages people to help wild birds survive winter by
  keeping feeders stocked and maintaining bird-friendly
  habitats
- Have a Heart for Chained Dogs Week (Feb 7-14): Mainly observed in the USA, this campaign opposes chaining dogs, promoting compassion, proper care, and awareness of their suffering.
- World Bonobo Day (Feb 14): A global call to protect bonobospeaceful, endangered primates-highlighting their intelligence, matriarchal societies, and the threats of extinction they face.
- Homes for Birds Week (Feb 10-16): Originating in the UK, this week promotes creating safe nesting habitats for birds and encourages environmental care. It's also observed in the USA, Canada, and across the EU.
- World Hippo Day (Feb 15<sup>th</sup>): Celebrates the iconic and often misunderstood hippopotamus, revered in African cultures and admired for its power and uniqueness.
- World Pangolin Day (Feb 15th): This day highlights the endangered pangolin, raising global awareness to combat poaching and habitat loss. Pangolins are native to Africa and Asia, including India.
- World Whale Day (Feb 16<sup>th</sup>): Originating in Maui, this celebration honours whales and brings attention to ocean health, pollution, and conservation needs.
- Bird Health Awareness Week (Feb 16-22): Encourages avian

- wellness through education on nutrition, behavior, and disease prevention for bird owners and enthusiasts. This week-long event was initiated by the USA.
- Champion Crab Races Day (Feb 17<sup>th</sup>): Originating in the USA, this fun community event features crab races to entertain and raise awareness about crustaceans. It's also celebrated in Trinidad and Tobago on Easter Tuesday in February.
- Cow Milked While Flying in an Airplane Day (Feb 18<sup>th</sup>):
   Originated in USA, it commemorates Nellie Jay, the first cow
   milked in flight-celebrating a fun piece of agricultural aviation
   history.
- National Arabian Horse Day (Feb 19<sup>th</sup>): Initiated by the Arabian Horse Association of Arizona (USA), this day honors the elegance, history, and companionship of the Arabian horse, celebrated also in countries like Qatar, Saudi Arabia, and the UAE.
- National Whippet Day (Feb 19<sup>th</sup>): Originated in USA, this day celebrates the lovable, speedy whippet breed-highlighting their quirks, community, and rescue awareness.
- Love Your Pet Day (February 20th): A special day to show extra love and care for your pets. Whether it's cuddles, treats, or extra playtime, it's all about strengthening the bond between you and your furry companions. It originated in USA.
- Whooping Crane Festival (Feb 20-23): Held in Texas, this birding festival welcomes the return of the endangered whooping cranes, promoting conservation and eco-tourism.
- National Walking the Dog Day (Feb 22<sup>th</sup>): Encourages dog owners to get out and enjoy exercise and bonding time with their pups-a reminder of the joy of daily walks.
- International Dog Biscuit Appreciation Day (Feb 23<sup>th</sup>): A treat-filled day celebrating the humble dog biscuit and the role of rewarding our loyal companions.
- International Polar Bear Day (Feb 27<sup>th</sup>): Raises awareness about polar bear conservation and climate change's impact on their icy Arctic habitat.
- Rare Disease Day (Feb 28<sup>th</sup>): Originating in France, this global day raises awareness of rare diseases in humans and animals, promoting research, support, and visibility for affected individuals and families.

### March Animal Days: A Celebration of Strength, Conservation, and Companionship

- March kicks off with Iditarod Trail Sled Dog Race (Mar 1), honoring the endurance of mushers and sled dogs across Alaska's wild terrain. The same day, we celebrate the charm of the Welsh Corgi, the grace of horses on National Horse Protection Day, and the smarts of pigs with National Pig Day. In Scotland, Mountain Hare Day highlights a resilient, endangered species.
- National Wildlife Week (March 1<sup>st</sup> -7<sup>th</sup>): Celebrated in the USA, this week promotes wildlife conservation through educational programs and events focused on protecting species and their habitats. In India, a similar National Wildlife Week is observed from October 2-8.
- International Rescue Cat Day (March 2<sup>nd</sup>): Originating in the UK and now recognized globally, this day raises awareness



about homeless cats and promotes adoption and rescue efforts to help them find loving homes.

- National Professional Pet Sitters Week (Mar 2<sup>nd</sup>- Mar 8<sup>th</sup>): Originated in the USA, a week salutes those who care for pets in our absence
- World Wildlife Day (March 3<sup>rd</sup>): Unites us globally to protect biodiversity, and on the same day.
- Festival of Owls Week (March 7<sup>th</sup> -9<sup>th</sup>): Held in Houston, Minnesota, this enchanting festival celebrates the mystery of owls with live shows, crafts, and educational programs-bringing the community together in wonder and learning.
- National American Paddlefish Day (March 9<sup>th</sup>): A call to protect the ancient paddlefish-this day spotlights their vital role in aquatic ecosystems and the urgent need for conservation as their numbers decline.
- Adelaide Cup Day (March 10<sup>th</sup>): South Australia's premier racing event, Adelaide Cup Day gallops in with thrilling horse races, high fashion, and vibrant entertainment at Morphettville Racecourse.
- National Aardvark Week (March 10<sup>th</sup>-16<sup>th</sup>): A week to celebrate the unique, nocturnal burrowing mammal native to sub-Saharan Africa aardvark -championing its crucial role in insect control and raising awareness about the need to protect its natural habitat.
- **Key Deer Awareness Day (March 11**th): Calls for the protection of Florida's tiny, endangered deer.
- Elephant Day in Thailand (March 13<sup>th</sup>): The celebration honors the mighty elephant's cultural and ecological value.
- National K9 Veterans Day (March 13<sup>th</sup>): Saluting the bravery and loyalty of military working dogs who serve alongside our armed forces and law enforcement. Primarily observed in the USA. Countries like the UK, Canada, and Germany also recognize similar commemorations for their canine heroes.
- Dog Theft Awareness Day (March 14<sup>th</sup>): Originating in the UK and adopted by countries like Germany, Canada, and South Korea, this day raises awareness about dog theft, promotes prevention, and urges communities to protect their pets.
- National Learn about Butterflies Day (March 14<sup>th</sup>):
  Originating in the USA and also observed in countries like Sri
  Lanka, this day encourages learning about butterfly life cycles
  and promotes habitat conservation.
- **Buzzards Day (March 15**<sup>th</sup>): Celebrated in Hinckley Township, Ohio, this annual event marks the return of migratory buzzards (turkey vultures) and honours their important role in the ecosystem.
- International Day of Action Against Canadian Seal Slaughter (March 15<sup>th</sup>): Originating in the USA, this day demands an end to cruel seal hunts and calls for global advocacy.
- Save the Florida Panther Day (March 15<sup>th</sup>): Day champions efforts to protect this critically endangered species and its habitat.
- World's Largest Rattlesnake Roundup (March 14<sup>th</sup> -16<sup>th</sup>): Held in Sweetwater, Texas, this event mixes education and

- entertainment to promote rattlesnake awareness and conservation.
- National Panda Day (March 16<sup>th</sup>): Celebrated in the USA, this day honors the giant panda and promotes global conservation efforts to protect this endangered species.
- National Animal Poison Prevention Week (March 16<sup>th</sup> 22<sup>nd</sup>): An urgent reminder to pet owners in the USA to educate about hidden household hazards and how to keep animals safe from toxic threats.
- National Poultry Day (March 19<sup>th</sup>): Celebrating the history and importance of poultry, from chickens to turkeys in the USA. This day honours the role these birds have played in food security and agriculture.
- National #Dogs in Yellow Day (March 20<sup>th</sup>): Celebrated in the UK, this day raises awareness about dogs that are anxious or nervous around other dogs. Owners of such dogs are encouraged to dress them in yellow, signaling to others to approach with care.
- International Day of the Seal (March 22<sup>nd</sup>): This day raises awareness about the threats seals face, including hunting and habitat destruction. It is celebrated in USA, Germany, South Africa and New Zealand to advocate for stronger protections and efforts to preserve these marine mammals.
- National Puppy Day (March 23<sup>rd</sup>): Originated in the USA, a fun-filled day celebrating the cuteness and joy puppies bring into our lives. It also promotes adoption, with a focus on finding loving homes for puppies in shelters.
- World Bear Day (March 23<sup>rd</sup>): Celebrated globbaly to honour bears and raise awareness about the challenges they face, including habitat loss and poaching. It focuses on conservation efforts to protect bear species.
- Tick Bite Prevention Week (March 24<sup>th</sup> -30<sup>th</sup>): A week aimed at educating the public about the dangers of ticks and tickborne diseases in UK, Ireland, USA and Belgium.
- Manatee Appreciation Day (March 26<sup>th</sup>): A day to appreciate and raise awareness about manatees, and their vulnerable status. This day focuses on protecting these gentle sea creatures from threats. Observed in the USA, Brazil, Mexico, Colombia, Venezuela, and other Caribbean nations.
- Respect Your Cat Day (March 28<sup>th</sup>): A day, primarily celebrated in the USA, dedicated to respecting and appreciating cats for their independent and mysterious nature. It's a reminder to treat them with the care and consideration they deserve.
- National Ferret Day (March 29): Celebrated in the USA, this day promotes responsible ferret ownership, highlights their care needs, and raises awareness about adopting ferrets from shelters and ensuring proper veterinary attention.

From icy plunges and playful pets to endangered icons and powerful conservation calls, the first quarter of 2025 has been a vibrant season of animal awareness. These celebrations remind us of our deep connection to the animal world-through joy, respect, and responsibility. As we look ahead, may this spirit of compassion continue to guide how we care for all creatures, great and small.



#### **SPLENDOUR**

#### SHINING VETERINARIANS

## Dr Inderjeet Singh Second Vice-Chancellor: A Visionary Leader for BASU

A distinguished luminary of veterinary sciences and Fellow (2000) NAVS(I), Dr Inderjeet Singh, assumed the esteemed role as the second Vice-Chancellor of Bihar Animal Sciences University (BASU), Patna, on January 20, 2025. Popularly known as the "Murrah Man" for his revolutionary work for buffalo development, Dr Singh brings four decades of exceptional contributions



especially leadership in veterinary science and animal husbandry to this prestigious role. His appointment represents significant opportunity for advancement of veterinary education and research across eastern India.

Dr Singh's illustrious career spans 40 years of dedicated service to veterinary and animal sciences. Before assuming his new role at BASU, he served as the third Vice-Chancellor of Guru Angad Dev Veterinary and Animal Sciences University (GADVASU) in Ludhiana with distinction. Under his visionary leadership, GADVASU witnessed remarkable all-round growth, particularly changing the landscape of academics with dynamic curriculum updation, problem solving and strategic research initiatives, modern clinical and farm infrastructure and impactful extension programs that directly supported livestock development and rural livelihoods. Prior to GADVASU, his role as Director of Animal Husbandry Punjab witnessed critical reassessment of the department manpower and activities.

Dr Singh's academic credentials are equally impressive. He holds a Ph.D. in Animal Reproduction from the prestigious University of Liverpool, UK, as a Commonwealth Scholar. His substantial contributions to academic research have garnered numerous international accolades and positioned him in key leadership roles throughout his distinguished career.

A defining chapter in Dr Singh's impactful professional journey was his tenure as Director of the Central Institute for Research on Buffaloes (CIRB) in Hisar from 2013 to 2018. His groundbreaking work on Murrah buffalo development during this period earned him national recognition and made profound impact on livestock development across states.

Dr Inderjeet Singh's appointment at BASU marks a significant milestone for the University as it continues to evolve as a center of excellence in veterinary and animal sciences. His vast experience, academic vision, and unwavering commitment to rural development through livestock production system research promises to bring transformative progress to both the university and the farming communities it serves.

The entire NAVS(I) community extends its heartfelt congratulations to Dr Singh on this well-deserved appointment and eagerly anticipates innovative developments that will undoubtedly emerge under his capable leadership at BASU.

## Prof KML Pathak Receives Prestigious Dr Stephen K Wikel Lifetime Achievement Award

The Indian Association for the Advancement of Veterinary Parasitology (IAAVP) has conferred the prestigious Dr Stephen K Wikel Lifetime Achievement Award upon Prof Krishan Murari Lal Pathak in recognition of his outstanding contributions to the field of Veterinary Parasitology. The award ceremony was held in Hyderabad and marks another significant milestone in Prof. Pathak's illustrious career. Prof Pathak, a distinguished veterinary scientist with over 41 years of experience, has



established himself as a leading authority in his field both nationally and internationally. Born in Etah, UP, he completed his education with academic excellence, earning his BVSc & AH (Hons), MVSc, and PhD from G B Pant University of Agriculture & Technology, Pantnagar, followed by post-doctoral research in Biotechnology from the University of Salford, United Kingdom.

Throughout his remarkable career, Prof Pathak has served in numerous influential leadership positions including Vice Chancellor of DUVASU, Mathura (2016-19), Deputy Director General (Animal Sciences) at ICAR (2010-15), Director of the National Research Centre on Camel, and Professor and Head of the Department of Veterinary Parasitology at Rajasthan Agricultural University, Bikaner. His expertise spans research, academia, and administration with significant contributions to frontier areas of veterinary and animal sciences.

A Fellow of the National Academy of Veterinary Sciences (2004) and former President of NAVS(I), Prof Pathak has been actively involved in policy programs as Chairman of the Indian Chamber of Food and Agriculture Working Group on Animal Health and as a member of the National Advisory Committee on Animal Health, MFAH&D, Government of India. His scientific contributions include 231 research publications in reputed journals, 8 books, and the development of 5 innovative concepts and 6 technologies. He has guided numerous PhD and MVSc students and serves as an editor and reviewer for several international and national scientific journals.

The IAAVP award adds to Prof Pathak's impressive collection of accolades, which includes honorary doctorates from NDUVAS, Jabalpur and DUVASU, Mathura, the Life Time Achievement Award by the Indian Chamber for Food & Agriculture, distinguished recognition from various professional bodies, and fellowships from prestigious academies including the National Academy of Agricultural Sciences. This recognition further cements Prof Pathak's legacy as one of India's most accomplished veterinary parasitologists with significant national and international standing, having represented Indian veterinary science across the globe through his association with organizations like WHO, FAO, OIE, and BIS. The National Academy of Veterinary Sciences (India) extends its warmest congratulations to Dr KML Pathak on this well-deserved honour.



#### Dr Raghavendra Bhatta Honored With Prestigious NAAS Award!

In a momentous ceremony at the XVII Agricultural Science Congress held at G.B. Pant University of Agriculture and Technology, Pantnagar, Dr Raghavendra Bhatta, Deputy Director General (Animal Science) at ICAR, was conferred the esteemed Dr P Bhattacharya Memorial Award by the National Academy of Agricultural Sciences (NAAS). The distinguished honour was presented by His Excellency Lt General Gurmit Singh (Rtd.), Governor of Uttarakhand, on February 20, 2025.

Dr Bhatta leads animal science initiatives at ICAR, New Delhi, following his directorship at NIANP, Bengaluru (2014-2024). He holds a doctorate in Animal Nutrition with gold medals for both his Master's and Doctoral work. At NIANP, he developed modern infrastructure and established international collaborations



with Germany, Australia, Japan, France, ILRI, and IAEA. His contributions have earned him fellowships at multiple prestigious agricultural science academies.

In an unprecedented achievement, Dr Bhatta has recently received three prestigious awards in quick succession. Along with the Dr P Bhattacharya Memorial Award from NAAS on February 20, 2025, he was presented the Dr. SK Talapatra Memorial Oration Award by Prof AK Srivastava, Vice



Chancellor, DUVASU, Mathura on January 28, 2025, and the Animal Nutrition Association Dr UR Mehra Lifetime Achievement Award on January 20, 2025.

These recent honors join his impressive collection of accolades, including the Sir C.V. Raman State Award from the Karnataka State Council for Science and Technology, Dr DVR Prakash Rao Outstanding Researcher Award, Eminent Scientist Award from the Society for Science of Climate Change and Sustainable Environment, and the prestigious Rafi Ahmed Kidwai Award for Outstanding Research in Agricultural Sciences from ICAR.

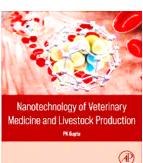
NAVS(I) extends heartfelt congratulations to Dr Bhatta on these remarkable achievements that continue to elevate India's standing in agricultural and veterinary sciences worldwide!

#### **ACADEMIA**

#### **SCHOLASTIC CONNECTIONS**

#### Book Review: Nanotechnology of Veterinary Medicine and Livestock Production

New book in published by Dr PK Gupta, a distinguished fellow (2004-05) of the National Academy of Veterinary Sciences (NAVS) and former Head of the Division of Pharmacology and Toxicology at the Indian Veterinary Research Institute, Izatnagar, titled "Nanotechnology of Veterinary Medicine and Livestock Production", by Elsevier USA in April 2025, provides a comprehensive overview of the latest advancements in nanotechnology applied to animal sciences.



### INSTITUTIONAL LIFE MEMBERS



Bihar Animal Sciences University Patna



Dau Shri Vasudev Chandrakar Kamdhenu Vishwavidyalaya, Durg



Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana



Kamdhenu University Gandhinagar



Karnataka Animal, Fishery & Veterinary Sciences University, Bidar



Kerala Veterinary and Animal Sciences University Pookode



Khalsa College of Veterinary & Animal Sciences Amritsar



Lala Lajpat Rai University of Veterinary & Animal Sciences Hisar



Maharashtra Animal & Fisheries Sciences University Nagpur



Rajasthan University of Veterinary & Animal Sciences Bikaner



Sri Venkateshwara Veterinary University Tirupati



Uttar Pradesh Pandit Deen Dayal Upadhyaya Pashu Chikitsa Vigyan Vishwavidyalaya Evam Go-Anusandhan Sansthan, Mathura.



The book explores various interdisciplinary applications of nanotechnology, including its use in animal disease treatment, the development of nanovaccines, animal nutrition, and production, as well as potential antibiotic therapies. It also addresses the risks, challenges, and opportunities associated with these emerging technologies.

This valuable resource is essential for researchers, clinicians, and animal scientists who seek to stay at the forefront of nano- and biotechnological innovations in veterinary medicine.

#### Court Stay on Publishing of NIRF Ranking 2025

The Madurai Bench of the Madras High Court has imposed a temporary injunction restraining the Ministry of Education (MoE) and the National Board of Accreditation (NBA) from releasing the National Institutional Ranking Framework (NIRF) for 2025.



This judicial intervention follows a public interest litigation that contends the NIRF ranking system is fundamentally flawed, lacking objectivity, and misleading prospective students. Launched under the direction of the MoE by the NBA, the NIRF was intended to assess Indian higher education institutions annually. The framework evaluates institutions across five broad categories: Teaching, Learning and Resources, Research and Professional Practice, Graduation Outcomes, Outreach and Inclusivity, and Perception.

Under this framework, the NBA mandates that institutions upload key data including student and staff demographics, faculty salaries, graduation indices, placement outcomes, and research fundingonto a dedicated portal. Rankings are then assigned based on this self-reported data, with no subsequent verification or auditing of the submitted figures. In contrast, the National Assessment and Accreditation Council (NAAC) employs a rigorous auditing process to validate the Annual Quality Assurance Report submitted by institutions, ensuring accuracy before assigning NAAC grades.

Critics of the NIRF framework argue that its lack of transparency and failure to verify submitted data renders the rankings unreliable. It is alleged that top positions are being granted to institutions without appropriate scrutiny of the data, which could ultimately compromise the quality of education across the nation. Prominent academicians and educationists have already expressed concern over the current evaluation methods employed by NIRF. The petitioner has called upon the court to mandate that the NBA publish the NIRF rankings only after a thorough comparison and verification of institutional data with official government records, in addition to disclosing the objective methodology used in the ranking process. (https://www.newindianexpress.com/states/tamil-nadu/2025/ Mar/21/do-not-release-nirf-rank-list-madras-hc-to-education-ministry)

### TIDBITS SOUPCON

# Alarm Bells Caution as Punjab's Livestock Numbers Plunge by 5.78 Lakh

The preliminary report of Punjab's latest livestock census reveals a troubling decline in the state's animal population, which has decreased by 8.5%-a loss of 5.78 lakh animals since 2019. The total livestock count now



stands at 68,03,196, compared to 73,81,540 in the previous census.

This marks the 21st livestock census underway, with data collected from October 2024 to February 2025. The preliminary findings indicate a significant drop in cattle (down by 2.32 lakh) and buffalo populations (down by 5.22 lakh). Interestingly, there has been a rise in the populations of sheep, goats, and horses, as well as an increase in dog numbers, signalling some shifts in livestock preferences.

Experts attribute this decline to rapid urbanization, changing agricultural practices, and a reduced marketing demand for traditional livestock. While the rise in sheep and goats offers a glimmer of hope, the overall trend calls for a deeper investigation into sustainable farming and livestock management practices.

As the full census report is awaited, the figures will likely offer more insights into the underlying causes and potential solutions to this concerning trend. (Tribune News Services)

# Comparative Analysis of Cancer Risks Associated with Blood Sugar Levels in Birds, Mammals, and Reptiles

A recent study by Arizona State University researchers explored the relationship between diet, blood sugar, and cancer prevalence across 273 vertebrate species from three major groups: birds, mammals, and reptiles. Surprisingly, the study found that birds, despite having significantly higher blood sugar levels and living longer than similarly sized mammals and reptiles, had a comparatively lower cancer prevalence. It also revealed that domestic carnivores such as dogs and cats are more prone to cancer than herbivores.

These findings challenge the existing assumptions regarding cancer risk and suggest that some species might have evolved natural biological defences against cancer. Specifically, the findings of this study imply that birds might have evolved unique biological mechanisms that protect them from cancer despite elevated blood sugar levels - mechanisms absent in mammals and reptiles. Understanding these adaptations could offer valuable insights into cancer biology, opening avenues for developing preventive and cancer therapeutic strategies.

The study also found no statistically significant link between diet and plasma sugar levels across nonhuman vertebrates. This suggests that evolutionary and physiological adaptations likely influence glucose regulation more than diet alone. While diet affects blood sugar levels in humans and some other species, it does not appear to be a universal rule across all vertebrate species. Additionally, the researchers discovered that domesticated species tend to have higher cancer prevalence, possibly due to reduced genetic diversity and weaker evolutionary pressures. This suggests that natural selection might have been crucialin limiting cancer susceptibility in wild populations. (*Nature Communications*; https://www.nature.com/articles/s41467-025-57344-1)



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#### SPONSORED CONTENT

#### **BROOKE HOSPITAL FOR ANIMALS (INDIA)**

An Organisation Committed to Equine Health & Welfare and the Development of the Marginalised Equine Owning Community

Brooke Hospital for Animals (India) or Brooke India (BI) is an affiliate of the Brooke, which is a United Kingdom-based international equine charity, focusing on the welfare and care of equines (horses, donkeys and mules). Brooke's vision is of a world in which working horses, donkeys and mules are free from suffering and have a life worth living.



Renu Devi, equine owner from Sonipat, with her mule

Bl's journey in India towards equine welfare started two decades back when it

was registered as a Section 8, Not for Profit Company under the Companies Act. Equids in India mostly work in harsh environments like Brick Kilns and face never-ending health troubles. This situation was mainly due to a lack of financial resources and knowledge on good management practices amongst the equine owners and insufficient understanding of equine health care by Local Health Providers (LHP).

Bl's initial step as an intervention involved providing free veterinary services at different congregation points and organising Intensive Equine Care Camps (IECC) to spread awareness on welfare

oriented husbandry practices and preventable injuries & diseases. From 2006 onwards, BI started focusing on establishing permanent intervention units and started expanding its operations to other states such as Andhra Pradesh, Rajasthan,



IECC Camps Luniyavas donkey fair

Hyderabad and other parts of Uttar Pradesh. The BI team also introduced Community Engagement for exploring sustainable solutions for equine welfare and community development. This period saw the formation of male and female Self Help Groups called Equine Welfare Groups, the use of Participatory Rural Appraisal tools and increasing community participation. BI team saw the congregation of equines, equine owners, traders and local service providers at Equine Fairs as an excellent opportunity for a large-scale intervention. BI teams intervened to spread awareness on equine welfare issues, provide quality training on equine care and ensure equine welfare-friendly facilities and resources at these fairs.

BI teams also focused on strengthening the local service delivery system for working equines, including quality farriery services for hoof care, accurate and appropriate veterinary first aid during health emergencies, hair clipping, and welfare-friendly saddlery material. They also ensured compassionate handling while

delivering any of the services. These interventions were incorporated in Brooke's Theory of Change, in 2016. This theory promotes strengthened animal health policy environment and thriving equine owning communities.



Equines working at Brick Kilns

Currently, BI operates directly through 32 Equine Welfare Projects (EWPs) across 10 States and Union Territories in India, thereby reaching out to approximately 3.16 lakhs working equids and the equine owning community that owns/rears them. BI has multidisciplinary teams with core strengths in Animal Health & Welfare, and Community Development, including Human behaviour Change, Gender Empowerment, Livelihoods and Resilience. Some of the notable achievements made by the team over the years include:

- Advocating the revision of Glander's Compensation- From INR 50 to 25,000 for horses and INR 16000 for mules/donkeys
- Inclusion of Equids in Livestock under the National Livestock Mission Schemes and thereby making them eligible for equine insurance.
- Advocating the issue of Animal Welfare Board of India (AWBI) advisories for Equine Fairs, Shrines & Pilgrim sites
- Introducing BI's innovative projects for ensuring sustainable availability of green fodder, through Azolla cultivation and Hydroponics techniques successfully across its intervention areas.
- BI teams worked throughout the COVID 19 pandemic. They supported the community by providing emergency treatments, alternative livelihood options, first aid kits and feed & fodder for the equines.

In the upcoming years, BI will focus on strengthening the

Community Based Organisations, linkages with government welfare schemes, have robust disaster response capacity, advocate policy revisions on equine welfare issues, and enhancing the knowledge and skills of veterinary students on animal welfare, compassionate handling and upskilling the local farriers and animal health providers.

BI's team is proud of its journey and

aspire to keep bringing a positive change



Quality Farriery Services

for vulnerable and marginalised working equines and the rural communities, whose lives we have not touched yet.



Introducing

**Zydus** AHL

For the First Time in India

**VetPlasma**<sup>™</sup>



#### **INDICATIONS AND USAGE**

VetPlasma is used primarily to treat acute hypovolemia & shock in conditions like Blood loss, diarrhoea, etc

#### **DOSAGE AND ADMINISTRATION**

Daily dose and rate of infusion depend on the animal's blood loss, hemodynamics and on the hemodilution effects

#### **Recommended Dose:**

Large Animals (Cattle & Horse):

8-10 ml/kg body weight/day, up to maximum 20 ml/kg Small Animals (Dog, Cat, Pig, Sheep & Goat) :

10-20 ml/kg body weight/day

Administer by intravenous infusion only.

The initial 10 to 20 ml should be infused slowly, keeping the animal under close observation due to possible anaphylactoid reactions

#### **PRESENTATION**

250 ml & 500 ml plastic bottle.



### **Restores Blood Volume Saves Life**





**Zydus Animal Health and Investments Ltd.** (A wholly owned subsidiary of Cadila Healthcare Ltd.)

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