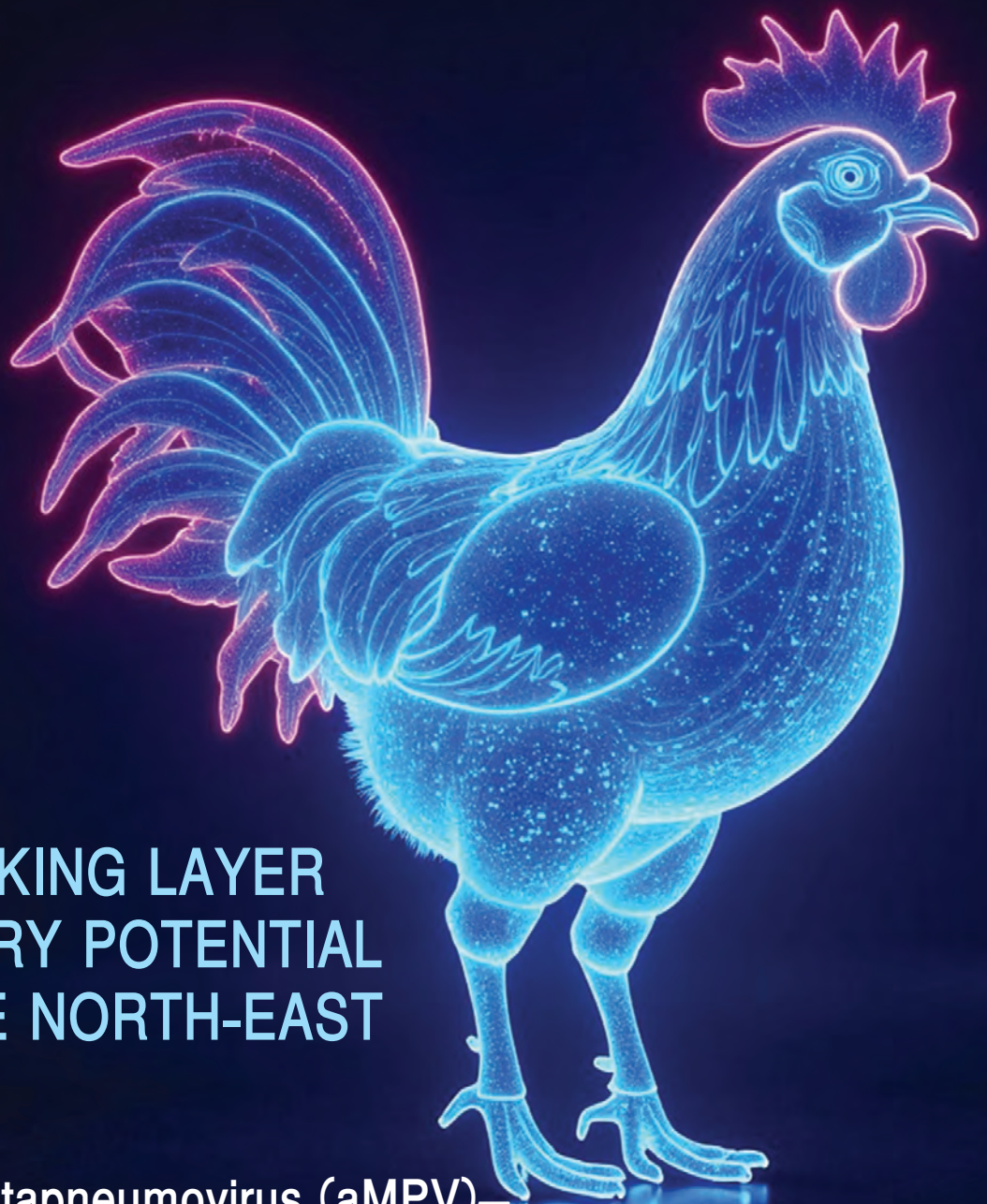
₹150
www.indianpoultryreview.com

INDIAN POULTRY REVIEW

THE MAGAZINE OF INDIAN POULTRY INDUSTRY | FEBRUARY 2026



COVER

UNLOCKING LAYER POULTRY POTENTIAL OF THE NORTH-EAST

ARTICLE

Avian Metapneumovirus (aMPV)– An Emerging Disease in Chickens

Shalimar Group

TOTAL®

Farm Fresh Chicken Eggs

*Representative image only *T&C Apply

ENRICHED WITH DHA & OMEGA 3

TOTAL® NSF sona Matrix+ Sona Sixer ADYA PURE FRESH TASTY Matrix Total Eco TOTAL Gold® Health & Happiness TOTAL DAILY CHICKEN

Registered Office:17A, B & C "Everest", 46C Chowringhee Road, Kolkata - 700071 Ph: 033 4017 9000 | Fax: 033 2288 2496
Corporate Office: 9, A. J. C. Bose Road, Ideal Centre, 2nd Floor & 5th Floor, Kolkata - 700017 Ph: 033 40543200 | 033 4023 9000

www.shalimarcorp.in

Venworld
THE BEST IN ANIMAL HEALTHCARE

VENGEM™

(Low Pathogenic Avian Influenza (H9N2) Vaccine, Inactivated)

"Most valuable Gemstones to bestow lives of Poultry
with a pinch of little more shades"

VENGEM 9

VENGEM C 9

Technology/know-how developed at ICAR-NIHSAD

VENTRI BIOLOGICALS

(Vaccine Division of VHPL)

'Venkateshwara House', S. No. 114/A/2, Pune Sinhagad Road, Pune 411030. **Tel.:** +91 (020) 24251803, **Fax:** +91-20-24251060 / 24251077.

VENTRI

CONTENTS

INDIAN POULTRY REVIEW
www.indianpoultryreview.com
THE MAGAZINE OF INDIAN POULTRY INDUSTRY

Volume 60 | Issue 07 | February 2026

MANAGING EDITOR : G. N. Ghosh
EXECUTIVE EDITOR : Sanjoy Mukerji
ASSOCIATE EDITORS : Shelley Ghosh | G. G. Narayana
ADVERTISEMENT SALES OFFICE - KOLKATA

57-B, Townshend Road, Kolkata-700 025
Phone: +91 98310 24002
E-mail: sanjoy@indianpoultryreview.com
Designed by Hushframe Ideas Pvt. Ltd.

Edited and Published by G.N. Ghosh from 57-B, Townshend Road, Kolkata-700025 and printed by G.N. Ghosh at Salmoli Publication, 57-B, Townshend Road, Kolkata - 700025

BAADER

A Century of Customer Support. And Counting.

Efficient Poultry Processing

For more than 100 years, BAADER has partnered with processors worldwide to design efficient poultry processing solutions – tailored to local requirements and aligned with global standards.

Scan the QR code
and discover how BAADER solutions can transform your production workflow

We deliver complete processing solutions for all capacities, combining smart product flow with automation at every level. And because performance doesn't stop at installation, our solutions are backed by fast, reliable support—wherever you operate.

BAADER Food Systems Denmark A/S / +45 8623 1455 / bfs-dk@baader.com / www.baader.com/poultry

WILL AI REPLACE EI IN POULTRY PRODUCTION?

G. N. Ghosh
Managing Editor

As artificial intelligence (AI) becomes the defining buzzword across industries worldwide, the poultry sector is no exception. With AI rapidly gaining ground in everyday life, poultry businesses are increasingly leveraging this advanced technology to enhance operational efficiency, improve decision-making, and drive productivity.

AI is rapidly reshaping poultry production. From precision feeding and climate-controlled housing to early disease detection and predictive analytics, AI promises efficiency, consistency, and scale like never before. Algorithms can now monitor bird behaviour, optimise feed conversion ratios, and flag health risks long before clinical signs appear. For an industry grappling with tight margins, volatile input costs, and rising sustainability expectations, AI appears to be a powerful ally.

Yet, the question remains: will Artificial Intelligence (AI) replace Emotional Intelligence (EI) in poultry production?

The short answer is no. While AI excels at data processing and pattern recognition, EI remains central to decision-making in complex, real-world farming environments. Poultry production is not only about birds and numbers; it is about people—farm workers, veterinarians, integrators, and consumers. Understanding human motivation, managing teams under pressure, responding empathetically during disease outbreaks, and making ethical choices around animal welfare cannot be delegated to algorithms.

Moreover, AI systems are only as effective as the people who design, interpret, and apply them. Knowing when to trust data, when to override a model based on experience, and how to communicate decisions across the value chain requires emotional maturity and industry wisdom. During crises, be it disease outbreaks, market disruptions, or regulatory scrutiny, leadership grounded in EI becomes indispensable.

The future of poultry production is not AI *versus* EI, but AI *with* EI. Technology will augment human capability, not replace it. Farms that thrive will be those that combine smart machines with emotionally intelligent leadership—where data driven insights are guided by empathy, ethics, and practical understanding. In this balance lies sustainable growth for the poultry industry.

Isolation, Molecular Characterisation And Impact Of FAdV Infection in Commercial Flocks During 2023-24

A.A. Agnihotri, N.R. Bulbule, S.U. Khardenavis, V.V. Deshmukh and M.M. Chawak*
Poultry Diagnostic and Research Center, Division of Venkateshwara Hatcheries Private Limited, Loni-Kalbhor, Pune 412 201, India
Email: drnrbulbule123@gmail.com

Fowl adenovirus (FAdVs) causes an economically important disease of grower birds. FAdVs belong to the family Adenoviridae and genus Aviadenovirus. FAdVs are classified into 5 species (FAdV-A to E) and 12 serotypes (FAdV-1 to 8a and 8b to 11). FAdV (Single or multiple serotypes) infections are associated with hydropericardium syndrome (HPS), inclusion body hepatitis (IBH), gizzard erosions (GE) and immune suppression in grower birds. In most cases Infectious Bursal Disease, Marek's Disease, Chicken Infectious Anemia Disease were predisposing factors. Other factors like feed mycotoxins and stress aggravate the FAdv infection leads to complex disease condition. In the current study more than 2000 samples (broiler 2000 and layer 300) were collected from all the zones during 2023-24 experiencing high mortality, dull and depressed birds showing hepatitis (distinct reticular pattern), hydropericardium, ascites and nephritis lesions in post-mortem examination. In commercial layers cases severe gizzard erosions were observed.

The tissue samples were collected in 50% GPBS and 10% formalin were processed for virus isolation, identification and histopathology respectively. Isolation was done by giving 3 passages in chicken embryo liver cells (CELi). The samples showing cytopathic effects were collected and confirmed using PCR. Total of 246/2300 (10.88%) samples were positive for FAdV out of total tested samples. In histopathology, 80% cases showed mycotoxicity type lesions in liver. Phylogenetic analysis of the 153 isolates of FAdVs from different regions of India based on hexon loop L1 gene were grouped into FAdV-A (serotype 1), FAdV-C (serotype 4), D (serotype 2, 3 and 11) and E (serotype 8) species. Most of the isolates were from FAdV-D (serotype 11) and E (serotype 8a and 8b). The pathogenicity study using representative isolates of FAdV-8 and 11 were carried out in four- week- old specific-pathogen-free (SPF) chicks. We observed FAdV serotype 8 isolates are more pathogenic than FAdV serotype 11 isolates. These findings provide important information on the epidemiology and characterisation of circulating FAdV strains in commercial growers. In conclusion, our study highlights the significant impact of Fowl Adenovirus (FAdV) infections on commercial grower birds in India, identifying a diverse range of serotypes with FAdV-D (serotype 11) and E (serotype 8) being predominant.

This research contributes valuable insights into the epidemiology and pathogenic characterisation of FAdV, aiding in the development of effective control strategies to mitigate economic losses in the poultry industry.

Comparative Assessment of Growth and Carcass Characteristics of Dahlem Red X (Native X Pb2) Crossbred Chicken Reared Under Farm and Farmer's Field Condition in Chhattisgarh

N. Ramteke, A.K Santra, O.P. Dinani, N. Singh, D.K. Barwa and R. Pathak*
College of Veterinary Science & A.H. Anjora Dau Shri Vasudev Chandrakar Kamdhenu Vishwavidyalaya, Durg, Chhattisgarh
Email: dr_dinani@rediffmail.com

The rearing of poultry in rural areas boosts household agriculture revenue overall in addition to enhancing nutrition for the family. In a backyard system, rural farmers raise native chickens with low egg and meat production. The goal of the current research was to establish a new location-specific breed for Chhattisgarh in order to enhance backyard production. In this context, native male (N) chicken from Chhattisgarh is crossed with PB-2 (Punjab broiler-2), a synthetic-coloured broiler female line acquired from the Directorate of Poultry Research, Hyderabad, to create the F1 generation (Native X PB2). The Directorate of Poultry Research, Hyderabad, provided the layer parent for the F1 generation's cross with the improved variety Dahlem Red. The resulting chicks, known as Dahlem Red X (Native X PB2), were then evaluated for growth and carcass qualities under farm and field conditions until they were 20 weeks old. In order to conduct the research, 480-day-old Dahlem Red X (Native X PB2) crossbred chicks were provided by the Poultry Demonstration and Experimental Unit (PDEU) of the College of Veterinary Science and Animal Husbandry, DSVCKV, Durg, C.G. which were split into two groups (four replicates, each containing sixty birds): T1, which was made up of 240-day-old Dahlem Red X (Native x PB2) chicks raised in an intensive system on a PDEU farm, and T2, which was made up of 240-day-old chicks raised in a semi-intensive system at the village in the backyards of four different farmers.

The chicks were measured for body weight, mortality percent, average daily weight gain, and carcass traits recorded until 20 weeks of age. At 20 weeks of age, there was no significant difference in the mean body weight of the birds raised under intensive system (1480.35±12.16 g) compared to those reared under semi-intensive system (1192.48±12.76 g).

The average daily weight gain under intensive and semi-intensive systems was 10.33±0.04 g and 8.27±0.10 g, respectively. It was found that the intensive system had an overall mortality percentage of 16.66±0.96 per cent and the semi-intensive system

had an overall mortality percentage of 17.08±1.42 percent up to 20 weeks. These figures were statistically similar in both rearing systems. Most of the carcass traits of Dahlem Red X (Native X PB2) crosses did better in intensive systems than in semi-intensive systems. The weight of the wings (127.79±8.40g), breast (264.16±13.85g), thigh (140.76±14.61g), drumstick (172.04±17.86g), and dressing percentage (73.62±1.42) were all significantly ($p<0.01$) higher in the intensive system than in the semi-intensive system.

The study concluded that an intensive technique of rearing produced better growth and carcass qualities than a semi-intensive system. Comparable crossbred mortality under both rearing systems demonstrates the crossbreds' adaptability to the local climate and toughness, making them a potential superior replacement for backyard poultry.

Determination of Optimum Body Weight at Housing of White Leghorn Chicken for Maximum Production Performance

Savaliya, F. P., Patel A. B. and Bhagora N. J.*
Kamdhenu University, Anand, Gujarat
Email: fpsavaliya@kamdhenuuni.edu.in

Uniformity in body weight of pullets and laying hens is an important concern for management to explore maximum production potential of White Leghorn layers. It helps to achieve optimum age at sexual maturity with better egg production and optimum egg weight.

Hence, this study was planned to determine the optimum body weight at housing (16 weeks) age for achieving maximum production performance. Two hundred (200) females of IWN strain of White Leghorn chicken were used for the study. Females were housed individually in cage system for individual recording and were managed under standard health care and managemental practices. Body weight ranging from 951 to 1300 g at 16 weeks of age was divided into 7 groups (treatments) with class interval of 50 g and data were recorded up to 40 weeks of age. Data analysis was carried out by using Completely Randomised Design. Body weight (BW) showed significant ($P \leq 0.05$) differences among all the groups. Age at first egg (AFE) showed non-significant differences between all the groups. Egg weight (EW) differed significantly ($P \leq 0.05$) at 28 and 40 weeks of age between all the groups. Total egg number (TEN) showed non-significant differences among all the groups.

However, highest egg number (128.24) was found in class interval of 1101 to 1150 g of body weight whereas, lowest egg number (121.74) was found in class interval of 1051 to 1100 g of body weight.

Overall results indicated that IWN strain of White Leghorn chicken having body weight ranging from 1101 to 1150 g at housing (16 weeks) age produced maximum egg production.

Morphometric Evaluation of Tibial Structures iIn Native Chicken and Coloured Broilers

Pachipala Radha Satya, B. Vasanthi, Krushna MurlidharThite and Sagar*
Department of Poultry Science, Madras Veterinary College, Tamil Nadu Veterinary and Animal Sciences University, Chennai
Email: radhasatyavet98@gmail.com

Tibial morphometry, the study of shape, size, and structural parameters of the tibial bone, is crucial in understanding the skeletal development and health of chickens. The tibia, one of the major weight-bearing bones in chickens, is essential in determining the leg health, locomotion, and skeletal robustness of the bird. Hence a study was conducted to evaluate the tibial structures in three chicken breeds, viz., Siruvidai, Kadaknath and Colored Broilers(CB). A total of 12 birds from each breed, maintained under uniform standard manage mental conditions were sacrificed at 12th week, and tibial morphometric parameters were recorded using vernier calipers and weighing scale. The results revealed that the bone weight (g) and bone length (mm) was significantly ($P<0.05$) higher in CB (31.05±1.83; 136.38±3.14) compared to Siruvdai (13.17±1.36; 111.69± 4.25) and Kadaknath (13.33±0.76; 117.38±2.10). The proximal diameter of tibia (mm) was significantly ($P<0.05$) higher in CB (14.07±0.90) followed by Siruvidai (11.00±0.49) and Kadaknath (9.00±0.22). However, there was no significant difference ($P>0.05$) in distal diameter among the three breeds. The lateral diameter was significantly ($P<0.05$) higher in CB (10.15±0.45mm) compared to Siruvidai (6.69±0.36mm) and Kadaknath (6.34±0.17mm). The width of proximal and distal condyle (mm) was significantly ($P<0.05$) higher in CB (7.61±0.68; 6.30±0.30) compared to Kadaknath (5.92±0.34; 4.26±0.26) and Siruvidai (6.46±0.24; 4.46±0.21). The Seedor index, that reflects bone density, and tibial medullary canal diameter (mm), was significantly ($P<0.05$) higher in CB (226.03±9.59; 15.84±1.21) compared to Siruvidai (114.92±8.51;8.66±7.38) and Kadaknath (112.84±5.08; 11.19±0.32). However, tibia robusticity index was significantly ($P<0.05$) higher in Kadaknath (4.97±0.05) compared to Siruvidai (4.80±0.08) and CB (4.36±0.05).

Thus, the tibial morphometry of coloured broilers and native chickens differed significantly because these two groups are genetically different and have different growth patterns and bone development, which affect tibial morphometry.

Therefore, by using tibial morphometry into breeding, management, and production practices, the productivity and quality of chicken breeds can be improved.

Source : 39th Annual Conference & Symposium of IPSACON 2024S

Why Origin Matters for Soybean Meal in Poultry Diets

As poultry genetics continue to advance, birds are growing faster and converting feed more efficiently than ever before. Soybean meal remains the foundation of poultry diets worldwide, supplying essential amino acids and energy. Yet not all soybean meal delivers the same nutritional value.

According to Dr. Tom D'Alfonso, Worldwide Director of Animal Nutrition at the U.S. Soybean Export Council, the country of origin plays a critical role in determining soybean meal consistency, digestibility and reliability in poultry feeding programs.

For D'Alfonso, the quality advantages of U.S. Soy begin in the field.

"Let's start with sustainability and work backwards," he said. "It is the sustainable farming practices of the U.S. Soy farmer that lead to these quality characteristics."

U.S. Soybeans are overwhelmingly grown by family-owned operations with long-term stewardship of their land.

Those farms were also early adopters of precision agriculture. U.S. Soy farmers were some of the first to use sophisticated technology like global positioning satellites (GPS) and precision nutrient practices that precisely apply only what's needed to the field and to the crop.

These sustainable practices directly contribute to the consistency of nutrient composition.

Post-harvest practices drive consistency

Beyond farming practices, D'Alfonso pointed to major differences in post-harvest handling between U.S. Soy and soybeans from other regions of the world.

"Soybeans grown in the United States do not require mechanical drying. They dry naturally in the field," he said. "Natural field drying significantly reduces the risk of heat damage. Because of that, we just don't have heat damage like we see very frequently in beans coming from tropical origins, such as Brazil," D'Alfonso said.

In tropical regions, beans are harvested at higher moisture levels. Moisture is a source of variability, and it dilutes every single nutrient in the bean. Mechanical drying, commonly used to manage moisture in tropical regions, can further compromise quality.

Both moisture dilution and overheating or heat damage reduce digestibility of the soy, making it a less efficient feed source.

Why soybean meal quality matters in poultry diets

These differences matter because soybean meal is central to poultry performance.

"Soybean meal is such an important ingredient in animal diets, particularly poultry," D'Alfonso said. "It's providing essential amino acids and metabolisable energy, and you're counting on those nutrients to get the birds to grow to their genetic potential and convert the feed most efficiently into animal protein."

Energy and amino acid digestibility

Quality tracking across origins has revealed consistent

advantages for U.S. Soy.

"We've been tracking the quality of soybeans and soy meal from different origins and to different destinations for more than 10 years and have identified a number of important trends," D'Alfonso said.

One key finding is the energy contribution of high-quality soybean meal. Research shows that U.S. Soy delivers 93.8% lysine digestibility and 2,400 kcal/kg metabolisable energy.

The high cost of variability

Variability in soybean meal from other origins often forces nutritionists to apply safety margins. Those margins come at a measurable cost.

"Because of variability and because of lower digestibility, if you're using soybean meal from other origins, you should really discount or use a safety margin in your feed formulas," D'Alfonso said. "It can impact around 100 kilocalories per kilogram or 50 kilocalories per pound," he said. "You're simply not going to get the potential that you could get out of those nutrients."

The same applies to essential amino acids in soybean meal. It's expected that will be 3% total lysine and about 2.7% digestible lysine. But variability from batch to batch and season to season that is seen from soybean meal from other origins makes it impossible to rely on that number.

Consistency supports predictable performance

Commercial trials show broilers fed soybean meal derived from U.S. Soy diets grow 4.2% faster with 3% better feed conversion rate.

Low digestibility and variability in nutrient composition will limit the animal from reaching its genetic potential. A balanced diet with U.S. Soybean meal as the foundation of the diet will allow animals to perform at their highest level, according to D'Alfonso.

"If an animal gets more calories one day than it needs, it just converts it to fat. If it has lower calories than are needed, it eats more," he said.

The outcome is straightforward. The net effect of variability is that the animal requires more feed consumption to compensate for the inconsistency.

ZEUS BIOTECH

HARNESSING THE POWER OF MICROBES FOR ANIMAL NUTRITION

34+ YEARS OF SCIENTIFIC INNOVATION

Built On Trust. Committed to Quality.

PROPEL FORWARD WITH FLEXIBILITY

Synergistic combination of Lysophospholipids, Polyglycerides and Synthetic emulsifiers for high efficiency fat digestion and nutrient absorption in poultry

Improves Oil energy and AME value | Faster, better digestion and absorption of nutrients | Improves weight gain and reduce FCR points

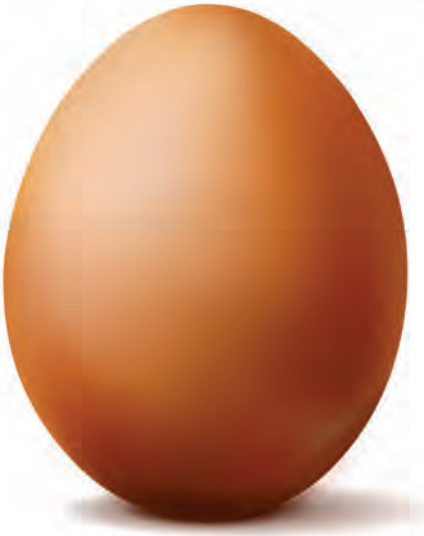
Lysoforte® 2.0

Science of Superior Nutrient Absorption

KEMIN®
Compelled by Curiosity™

kemin.com

Ganga
Best Quality Symbol GROUP



IDEAL EGGS:-

Clean, Free of cracks, correct shape, within acceptable weight range...

Better Uniformity (No runts/stunts)

GANGA HATCHERIES

We deal in only 430Y hatching eggs

Our Hatching eggs are free from vertically transmissible diseases like the Fowl Typhoid, Mycoplasmosis, Reo, Adeno, CAV etc.

Ganga
Best Quality Symbol GROUP

Corporate Office:
Village Bhalsi,
Near Ganga Filling Station (NAYARA)
Panipat 132113, Haryana (India)
Mob.: +91-94160-00350
E-mail: gangahatcheries@gmail.com
Web: www.gangagroup.org.in

Vencobb

Article

From INR to USD: Reimagining India's Poultry Industry through Export

Dr. Chandan
Owner, LIORAA
Strategic Advisor for Animal Nutrition and Health Organisations

Two months ago, I was shopping for groceries in a supermarket in Singapore when I couldn't help whispering, "So costly," while staring at the price of eggs. A pack of 10 eggs cost SGD 3.7—roughly Rs. 252. That's Rs. 25 per egg, enough to buy four eggs back home in India. A week later, I was in Namakkal, Tamil Nadu, sitting with Ramanna, a layer farmer, during a meeting. He was visibly worried. The lifting rate had dipped again, thanks to oversupply. Soaring input costs added pressure from the other side. "We raise good birds," he sighed, "but we sell them like they're invisible."

His frustration echoes across India's poultry belt. Farmers and integrators produce millions of tons of chicken and eggs, yet struggle to break free from the fluctuating price barriers of the domestic market. Their produce is commoditised, their margins squeesed. But when premium markets like Singapore, UAE, and Saudi Arabia surround us, why aren't we tapping into them?

The truth is sobering: India is not yet producing world-class poultry. Nor does it enjoy a cost advantage or internationally recognized disease-free zones. But that doesn't mean it can't. We've been myopic—focused only on domestic demand. What if, instead of chasing prices in local mandis, India's poultry sector aimed for supermarket shelves in Singapore and breakfast tables in Dubai? The challenge isn't just production—it's transformation. It's time to stop thinking in kilos and cartons, and start thinking in destinations, differentiation, and dollars.

Why Export Is a Strategic Imperative

India's poultry industry has grown rapidly over the past two decades, driven by improved genetics, feed efficiency, and vertical integration. Yet its export footprint remains negligible. Friends often say, "We can't compete with the US or Brazil." I always counter: "If Thailand can, if Vietnam and the Philippines can, why can't we?"

Global demand for processed, frozen, and ready-to-cook poultry is surging—especially in ASEAN, Gulf countries, and parts of Africa. These markets are hungry for affordable, safe, and culturally adaptable protein. India has the scale, but not yet the systems to serve them. To compete globally, we must first acknowledge the gap. We need to build the infrastructure, protocols, and branding required to meet international standards. That means creating disease-free zones, enforcing biosecurity,

and adopting world-class farming and processing practices—not just for export, but as a blueprint for domestic transformation.

Poultry SEZs: Building Export-Grade Ecosystems

One bold solution is the creation of Animal Husbandry Special Economic Zones (SEZs)—with Poultry SEZs as a priority. These zones, strategically located in coastal states like Tamil Nadu, Andhra Pradesh, Gujarat, and Odisha, would be dedicated to producing poultry exclusively for international markets. Within these SEZs, only world-class practices would be permitted—from hatchery hygiene and feed protocols to slaughter standards and cold chain logistics. Farms and processors would operate under export-grade compliance, with strict traceability and veterinary oversight.

These SEZs must be supported by robust shipping infrastructure. Ports near these zones should be equipped with fast-loading docks, quality inspection labs, and veterinary certification facilities. Time-sensitive exports like frozen chicken and processed eggs require seamless logistics. A delay of hours can mean the loss of entire consignments. These SEZs must be built with speed, safety, and scale in mind.

To attract investment and signal national priority, the government should also consider sector-specific taxation for produce originating from these SEZs. Preferential GST rates, income tax rebates for SEZ-based processors, and customs duty waivers on imported equipment could incentivise participation and innovation. More importantly, such targeted taxation would drag focused government attention toward poultry as a strategic export sector—creating a fiscal identity that distinguishes it from

general agriculture.

These SEZs wouldn't just serve global demand—they would act as incubators for best practices, influencing the broader domestic industry over time. What begins as an export hub could evolve into a national benchmark for quality, compliance, and profitability.

Processed Poultry: The Format That Wins

The future of poultry exports lies in value-added formats. Raw carcasses have limited appeal and low margins. But ready-to-cook and ready-to-eat products—marinated fillets, spiced wings, grilled strips—are in high demand across international markets. These formats offer better shelf life, higher consumer appeal, and stronger brand potential.

Processed poultry also enables byproduct monetisation—bones, skin, and offal can be converted into pet food, gelatin, and other value-added products. This expands the revenue base and strengthens the economics of the entire poultry chain.

India can tap into this by developing regional brands that reflect its culinary heritage. Imagine "Tandoori Chicken Strips" in Southeast Asia or "Masala Wings" in Gulf supermarkets—products that carry both flavour and identity. But branding must be backed by quality. Without export-grade processing and packaging, even the best recipes won't travel far.

Eggs: Small Format, Big Opportunity

Eggs are among the most efficient sources of animal protein, and their global demand is rising—especially in processed formats. India, with its vast layer population, can become a reliable supplier of egg powders, liquid eggs, and boiled formats.

Currently, low domestic prices often compel farmers to compromise on quality. When an egg sells for Rs. 6–7 in India but fetches Rs. 20–25 in Singapore, the opportunity gap is glaring. Can we afford to ignore it?

Egg powders serve baking and food manufacturing industries, while liquid eggs cater to hotels, airlines, and catering services. Boiled and peeled eggs are ideal for ready-to-eat segments. With proper grading, packaging, and cold chain support, eggs can become a high-volume, high-frequency export item—quietly powerful, globally relevant.

Export as a Roadmap for Domestic Reform

Export orientation isn't just about foreign exchange—it's about raising the bar. By building SEZs, enforcing global standards, and incentivizing excellence, India can create a roadmap that transforms its entire poultry ecosystem. What starts as an export hub can evolve into a domestic benchmark.

Farmers and integrators outside SEZs will begin to adopt best practices to qualify for future inclusion. Processors will upgrade facilities to meet export norms. Cold chain operators, logistics providers, and even hatchery suppliers will align with the new expectations. In time, the SEZ model will ripple outward—lifting the entire sector.

The Road Ahead

India's poultry entrepreneurs, integrators, and policymakers must now embrace a new narrative—one that sees export not as an afterthought, but as a strategic engine. Whether it's a broiler processor in Tamil Nadu, an egg cooperative in Andhra Pradesh, or a cold chain startup in Maharashtra, the message is clear: think global, act strategic, build bold.

India's poultry industry is not yet world-class. But with vision, investment, and policy alignment, it can be. The world is waiting—and it's hungry.

Article

Budget 2026 Qua Animal Husbandry Reading Between the Lines

The bright red bag the Finance Minister carried to the Parliament for the Budget presentation generated a bit of curiosity. Was it symbolically showcasing the transformation from the erstwhile British inherited Briefcase to the indigenous Bahikhata, albeit a digital one, further signifying our adoption of technology in governance. Interesting to learn that the word "budget" has its origin in the French word bougette, meaning a leather bag, wallet or pouch which later evolved to bouget and then a Middle English word budjet i.e. the king's bag containing the money necessary for public expenditure. This probably explains the prominence in media pictures given to the bag the Finance Minister carries to the Parliament for budget presentation. The discussion too, before and after the budget, centres around money collection and distribution across sectors. The budget now is not just a money bag but a central policy document of the government, defining and prioritising its annual and multi-annual objectives; it is an expression of the values and aspirations the nation holds.

Does the current budget give a fresh lease of life, a healthier one, to the animal husbandry sector? Does it look beyond the run of the mill programmes focussed on distribution of subsidies on sundry investments and activities? Let us take a fine-tooth comb and scratch the surface.

The context of this budget is defined by the Economic Survey 2025-26, which highlights that while the overall agriculture and allied sector grew at an average rate of 4.4% at constant prices over the last five years, the internal dynamics of this growth are increasingly asymmetric. Livestock GVA has surged at approximately 7.1% annually over the last decade, compared to a more modest 3.5% for traditional crops. Consequently, the 2026-27 budget doubles down on these growth engines, rewarding sectors that demonstrate higher productivity gains and export potential while paring back research and subsidy outlays for core crop agriculture.

The 2026-27 budget has been presented in an environment of global upheavals and disruption of the established order, from wars, real and imminent; near collapse of the global rule based engagement; prohibitive, erratic and penal tariffs; a reverse of trade globalisation etc. Rebuilding economic confidence in such an environment is indeed a challenge. The total estimated government expenditure stands at Rs. 53,47,315 crore, reflecting a 7.7% increase over the revised estimates of 2025-26. Within this vast fiscal canvas, the Ministry of Fisheries, Animal Husbandry and Dairying has received a combined allocation of Rs. 8,915.26 crore, with the Department of Animal Husbandry and Dairying (DAHD) alone securing Rs. 6,153.46 crore, a remarkable 27.1% increase over the previous year and 107.8% growth since 2024-25. This allocation comes against the backdrop of the livestock sector contributing nearly 16% of farm income and growing at over 7% annually, outpacing traditional crop agriculture. This fiscal prioritisation also reflects the reality that livestock provides a critical safety net for poor and marginal households during crop failures.

The budgetary architecture for 2026-27 reveals strategic priorities across the livestock value chain. The Livestock Health and Disease Control Programme remains the largest recipient at Rs. 2,010 crore, focused on nationwide vaccination drive against Foot-and-Mouth Disease and Brucellosis. While this may represent only a 1.5% increase from the previous year, the continuity of funding ensures sustained veterinary services and disease surveillance capacity.

The National Programme for Dairy Development (NPDD) received Rs. 1,055 crore, up 5.5% from Rs. 1,000 crore in 2025-26. This allocation targets dairy processing infrastructure, milk chilling facilities, cooperative development, and quality control mechanisms to address the persistent challenge of post-harvest losses and low value addition in India's dairy supply chain. Over the past two years, NPDD funding has surged by 258.9% from its 2024-25 actual expenditure of Rs. 293.92 crore, reflecting an accelerated push toward modernisation.

The Rashtriya Gokul Mission (RGM) secured Rs. 800 crore for indigenous breed improvement and genetic enhancement. This represents a substantive restoration after receiving only a token provision (Rs. 0.01 crore) in Budget 2025-26 before mid-year revision increased it to Rs. 700 crore. RGM's focus on establishing "Gokul Grams" (cattle centres) and conserving native breeds addresses India's chronic low per-animal productivity which is a fundamental constraint of our dairy's competitiveness.

The Animal Husbandry Infrastructure Development Fund (AHIDF) received Rs. 465 crore for interest subvention and credit guarantees. As a part of the flagship Rs. 15,000 crore fund launched under Atmanirbhar Bharat, AHIDF incentivises private investment in dairy processing plants, meat processing facilities, animal feed plants, and breed improvement technologies. This modest 1.1% increase suggests the fund is reaching maturity as

a lending instrument rather than requiring substantial fresh capitalisation.

The National Livestock Mission (NLM) allocated Rs. 808 crore, is up marginally by 1% from Rs. 800 crore. NLM targets entrepreneurship development in small ruminants, poultry, and piggery sectors, alongside feed and fodder development. The mission's objectives include increasing per-animal productivity through breed improvement and boosting production of meat, eggs, goat milk, wool, and fodder. This allocation reflects the government's commitment to diversified livestock systems beyond cattle and buffalo.

Integrated Entrepreneurship Development Scheme is a new initiative announced in the budget with a landmark Rs. 500 crore allocation encompassing five interconnected components: 1. Credit-Linked Subsidy Programme for animal husbandry entrepreneurship, 2. Scaling-up and modernisation of livestock enterprises, 3. Creation of livestock, dairy, and poultry-focused integrated value chains, 4. Encouragement of Livestock Farmer Producer Organisations (FPOs), 5. Training of veterinary professionals. This integrated approach represents a paradigm shift from sectoral silos toward ecosystem-based development. The scheme's design recognises that enhancing productivity requires simultaneous investments in infrastructure, skills, market linkages, and collective institutions.

While the Budget does not delineate a standalone poultry allocation, the sector could benefit through the National Livestock Mission (Rs. 808 crore) and the Integrated Entrepreneurship Development Scheme (Rs. 500 crore). The Finance Minister explicitly highlighted efforts to establish "integrated value chains focused on livestock, dairy, and poultry" and promote "scaling-up and modernisation of livestock enterprises". Industry leaders welcomed these provisions, noting that credit-linked subsidies and technological advancements address persistent productivity and efficiency challenges in poultry operations. The extension of tax deductions to cattle feed supply by primary cooperatives also benefits the poultry sector indirectly by reducing feed costs which is the single largest input expense comprising about 70% of production costs.

By prioritising allied sectors, the Budget aligns with the structural transformation underway in India's agricultural economy. As farm sizes shrink and climate variability intensifies, livestock and aquaculture offer more resilient and diversified income sources for smallholders.

The new Rs. 500 crore Integrated Scheme for Entrepreneurship Development represents a sophisticated policy design and eco-system approach that moves beyond fragmented interventions. By bundling credit-linked subsidies, value chain creation, FPO promotion, and skills training into a single scheme, there is an acknowledgement that productivity gains require simultaneous action across multiple dimensions.

The extension of tax deductions to cattle feed and cotton seed supply, combined with relief on inter-cooperative dividends, demonstrates a nuanced understanding of cooperative economics. Unlike direct subsidies that create dependency, tax reforms enhance cooperatives' intrinsic financial sustainability. India's dairy cooperatives already return about 70% of the consumer rupee to producers, higher than the 50% typical in private dairies. By reducing the tax burden, the Budget further strengthens this producer-centric model, which has been instrumental in India becoming the world's largest milk producer.

While the Budget does not delineate a standalone poultry allocation, the sector could benefit through the National Livestock Mission (Rs. 808 crore) and the Integrated Entrepreneurship Development Scheme (Rs. 500 crore)

A sharp focus on veterinary human capital is quite evident. The loan-linked subsidy for establishing private veterinary colleges, hospitals, and diagnostic laboratories addresses a foundational constraint. India's veterinarian-to-livestock ratio is abysmally low. This shortage manifests in unscientific husbandry, delayed disease diagnosis, poor reproductive management, suboptimal feeding practices etc., all directly impacting productivity. By incentivising private sector participation through capital subsidies and facilitating foreign collaborations, the Budget could accelerate capacity building beyond what government institutions alone can achieve. The target of adding 20,000 veterinary professionals represents approximately a 25-30% increase in India's current veterinary workforce over the next 3-5 years.

Still there are certain critical limitations and concerns that seek an answer. And foremost amongst them is that the poultry sector remains an afterthought. Despite India being the second largest egg producer globally and poultry contributing significantly to nutritional security for lower-income households, the Budget lacks dedicated poultry allocations or targeted initiatives. Poultry receives mention only as a part of the broader livestock value chains under NLM and the integrated entrepreneurship scheme. This neglect is particularly glaring given poultry's transformative potential for women's empowerment and rural employment. Backyard poultry requires minimal capital, can be managed by women alongside household activities, and provides both nutrition and cash income. Countries like Bangladesh have achieved significant poverty reduction through targeted poultry development programs for women. India's Budget misses an opportunity to replicate these successes through dedicated funding, breeding stock supply chains, and market linkages for backyard poultry. Commercial poultry faces different challenges: feed cost volatility, disease outbreaks, waste management etc. The Budget's silence on disease surveillance infrastructure, feed security programs, or biosecurity standards leaves these systemic risks unaddressed.

The Rs. 800 crore allocation to RGM reflects the government's ideological commitment to conserving indigenous cattle breeds. While breed conservation has scientific merit for genetic diversity, RGM's primary focus on "Gokul Grams" and native breed promotion may be misaligned with productivity imperatives. India's average milk yield per indigenous cow is approximately 3-4 litres per day, compared to 9-10 litres for crossbred and exotic breeds. This productivity gap explains why India requires a massive bovine population of over 300 million to produce its milk output—creating significant methane emissions and feed resource strain. RGM's emphasis on indigenous breeds, while culturally and

politically popular, risks diverting resources from more impactful interventions like artificial insemination infrastructure, sexed semen technology, and genomic selection programmes that could work with both indigenous and crossbred populations. The scheme's design should explicitly balance conservation objectives with productivity enhancement through scientifically validated breeding strategies rather than merely breed nationalism.

The Rs. 500 crore Integrated Entrepreneurship Development Scheme is conceptually compelling but operationally ambiguous. The Budget does not provide clarity regarding allocation breakdown among the five components (credit-linked subsidies, modernisation, value chains, FPOs, training), eligibility criteria for beneficiaries across different livestock categories, institutional mechanisms for scheme delivery, subsidy rates and loan terms, monitoring frameworks to assess value chain creation and FPO effectiveness. Without clear operational guidelines, transparent delivery mechanisms, and robust monitoring, the Rs. 500 crore allocation risks becoming another underutilised scheme with limited transformative impact.

The Rs. 2,010 crore allocation to Livestock Health and Disease Control represents only a 1.5% increase from Rs. 1,980 crore in 2025-26. While foot-and-mouth disease (FMD) and brucellosis control programs are important, this allocation appears insufficient to address emerging challenges. Post-COVID-19, the One Health framework recognising human-animal-environment health inter-connections has gained prominence. Yet the Budget lacks specific provisions for strengthening disease surveillance at the human-animal interface, diagnostic capacity for emerging pathogens, or coordinated response mechanisms. Rising temperatures and changing rainfall patterns alter disease vectors and stress livestock physiologically, reducing immunity. Heat stress alone reduces milk production by 10-25% during summer months. Climate-resilient animal health infrastructure deserves targeted investment. The modest increase in health allocations suggests that livestock health is primarily being viewed through the lens of specific disease control programs rather than as a comprehensive system requiring continuous innovation, adaptation, and strengthening.

While NPDD received Rs. 1,055 crore for dairy development, India's milk processing rate remains at a low of about 30-35%, with the rest consumed as raw or loose milk. Developed dairy economies process nearly 100% of production, enabling quality control, value addition, and extended shelf life. The persistent processing gap indicates that several constraints remain inadequately addressed: a) Cold chain infrastructure: Last-mile refrigeration at village collection centres and bulk cooling facilities remain insufficient, especially in Eastern and North Eastern states. The Budget provides no explicit allocation for expanding cold chain density; b) Processing technology: Indian dairy plants predominantly produce liquid milk and basic products (butter, ghee, paneer). High-value products like cheese, yogurt, whey proteins, and dairy-based nutraceuticals require sophisticated processing technology and skilled workforce—areas receiving insufficient attention, d) Cooperatives versus private sector: AHIDF theoretically supports both cooperatives and private processors, but cooperative-dominated states (Gujarat, Rajasthan) have far superior infrastructure than private-dominated regions (Bihar, Uttar Pradesh). The Budget lacks mechanisms to accelerate cooperative formation in underserved regions or ensure equitable AHIDF access.

A glaring omission in Budget 2026-27 is the near-absence of dedicated allocations for fodder and feed security—the foundational constraint on livestock productivity. India faces a green fodder deficit of up to 32%, dry fodder deficit of 23.4%, and concentrate feed deficit of 28.18% according to various estimates. In fact, feed and fodder shortage is often referred to as the invisible crisis plaguing the livestock sector. Feed costs constitute 60-70% of production costs in dairy and poultry operations. Volatile maize and soybean prices, inadequate fodder cultivation area, and poor quality silage infrastructure directly constrain productivity and profitability. The National Livestock Mission includes feed and fodder components, but the Rs. 808 crore NLM allocation is spread across multiple objectives (entrepreneurship, breed improvement, insurance), diluting focus on feed security. A comprehensive feed and fodder strategy should include: i) Fodder block/seed programs to incentivise

cultivation of high-yielding fodder varieties, ii) Silage-making infrastructure at cooperative and FPO levels for year-round quality feed availability, iii) Research and extension on crop residue utilisation, protein supplements, and area-specific fodder systems, iv) Policy interventions to ensure livestock farmers have equitable access to agricultural by-products currently diverted to industrial uses or burned. The Budget's silence on this foundational constraint suggests that productivity enhancement may remain aspirational rather than operational.

While the Budget mentions support to women-led groups in fisheries value chains, it lacks explicit gender-targeted interventions in animal husbandry and dairying. Women perform 70-80% of livestock-related work in India—feeding, cleaning, milking, processing-yet face persistent barriers such as: a) Asset ownership: Livestock often remain registered in men's names, excluding women from credit access and scheme benefits, b) Decision-making power: Marketing decisions and technology adoption choices are typically male-dominated despite women's operational role, c) Skills and confidence: Extension services and training programs disproportionately reach male farmers. Progressive states like Kerala and Tamil Nadu have experimented with women-exclusive livestock groups and gender-specific training programs with positive outcomes. Scaling such approaches requires dedicated budget allocations, gender-disaggregated monitoring frameworks, and institutional mechanisms ensuring women's participation. The Budget 2026-27 misses an opportunity to mainstream gender equity across livestock schemes.

The livestock sector contributes significantly to greenhouse gas emissions (methane from enteric fermentation), water pollution (manure runoff), and land degradation (overgrasing). While the Budget speech invokes "sustainable growth of the livestock economy," actual provisions for environmental sustainability are minimal. Sustainable growth would require the following interventions: 1. Methane reduction technologies: Feed additives, breeding for low-emission animals, and manure management systems can significantly reduce emissions. The Budget includes no dedicated R&D or adoption support. 2. Integrated crop-livestock systems: Utilising crop residues for livestock feed and manure for organic fertilizer creates circular economies. This requires extension services, equipment support, and farmer training. 3. Pasture and grassland restoration: India's common grazing lands have shrunk from 13 million hectares to 8-9 million hectares, forcing higher stocking densities and degradation. Pasture development and community-based management deserve dedicated funding. Without addressing environmental externalities, India's livestock growth risks becoming unsustainable and facing export barriers as global markets increasingly demand climate-certified products.

Some of the strategic recommendations worth a serious consideration would be as follows: 1. Create a National Poultry Mission with Rs. 300-500 crore annual allocation focused on backyard poultry for women, disease surveillance infrastructure, and feed security programs. 2. Refocus and reorient RGM on Productivity Enhancement to explicitly balance conservation with productivity. Allocate 40% of funds to indigenous breed conservation (germplasm centres, community-based breeding programs) and 60% to productivity enhancement interventions (AI infrastructure, genomic selection, sexed semen) that work across breed types. 3. Operationalise Integrated Entrepreneurship Scheme rapidly. Issue detailed operational guidelines for the scheme soon, specifying eligibility, subsidy rates, application procedures, and implementing agencies. Establish dedicated entrepreneurship cells in state animal husbandry departments with business development professionals, not just technical officers. 4. Launch a National Fodder Security Mission. Create a time-bound Fodder and Feed Security Mission with at least Rs. 1,000 crore annual allocation to address the feed deficit crisis. Focus on fodder seed multiplication, silage infrastructure, technology demonstration, and policy reforms to improve access to agricultural by-products. 5. Mainstream Gender in all schemes. Mandate that all livestock schemes allocate minimum 30-40% benefits to women through targeted components. Introduce women-exclusive FPOs, gender-sensitive extension approaches, and asset ownership documentation support. 6. Strengthen Veterinary education quality. While expanding veterinary professional numbers by 20,000 is welcome, ensure quality through accreditation standards, faculty development programs, and competency-based curricula. Partner with international institutions for curriculum design and teaching faculty exchanges. 7. Create a dedicated Rs. 500 crore Climate Adaptation Fund within LHDC for heat stress mitigation infrastructure, climate-adjusted disease management, and resilient breed development.

To conclude, while the Union Budget 2026-27 marks a significant financial and policy commitment to animal husbandry, dairying, poultry sectors, critical gaps persist. The Budget's ultimate success will depend on the following factors: speed and clarity of operational guidelines for new schemes, institutional capacity building at state and district levels for effective implementation, and continuous monitoring with mid-course corrections based on field realities. If these conditions are met, Budget 2026-27 could catalyse a genuine transformation in India's Animal Husbandry sector, enhancing rural incomes, nutritional security, and global competitiveness. If not, it risks joining the long list of well-intentioned but inadequately executed schemes. A robust monitoring framework that tracks outcomes (productivity, income, employment) rather than just outputs (funds released, beneficiaries covered) should be established forthwith to convert the immense possibilities the Budget offers into realities; this would require committed professional leadership, robust institutional structure, innovative approach and a relentless focus on implementation. As the proverb goes: the proof of the pudding is in the eating.

The Budget's ultimate success will depend on the following factors: speed and clarity of operational guidelines for new schemes, institutional capacity building at state and district levels for effective implementation, and continuous monitoring with mid-course corrections based on field realities

HUVEPHARMA®

Huvepharma® is your chosen partner for sustainable livestock solutions.

Huvepharma N. V.
Uitbreidingstraat 80 2600 Antwerp Belgium
P +32 3 288 1849 F +32 3 289 7845
customerservice@huvepharma.com

Follow us at: huvepharma SEA

Huvepharma SEA (Pune) Pvt. Ltd.
42, 'Haridwar', Road 2 A/B,
Kalyani Nagar, Pune 411006
P +91 20 2665 4193 F +91 20 2665 5973
salesindia@huvepharma.com

Birds prefer meyn®

MEYN® EVISCERATION M4.0 PRO SERIES

Smart enough **to stay simple**

- Doors open? Line stops
- Scheduled maintenance? Made easy
- Full line adjustment? Push of a button

Scan for more information

Feel free to contact Meyn India Private Limited
Call +91-120-6910900 or mail meynindia@meyn.com

Article

Avian Metapneumovirus (aMPV)– An Emerging Disease in Chickens

Prof. R. N. Sreenivas Gowda
Former and Founder VC,
KVAFSU, Bidar,
Former Director
IAH & VB, Bangalore,
Former Prof & HOD,
Dept. of Pathology, Veterinary
College UAS, Bangalore

Introduction

Avian metapneumovirus (aMPV) infection is an emerging highly contagious viral respiratory disease in poultry, especially broilers in recent years. Often it occurs along with Ranikhet disease. The disease causes both respiratory distress and reduced egg production. The virus can lead to significant economic losses in the poultry industry, particularly when secondary bacterial infections are present and is commonly associated with Turkey Rhinotracheitis (TRT) and Swollen Head Syndrome (SHS) in broiler chicken.

First detected in 1978 in South Africa in ostrich birds, the virus has spread all over the world except Australia. It is mostly found in turkeys, pheasants, Muscovy ducks and guinea fowls. Turkeys are the most susceptible species for all subtypes. It is presumed that other species are immune.

Birds with the virus initially present with sinusitis, resulting in nasal discharge, snicking, coughing, head shaking, caked nares as well as conjunctivitis and airsacculitis. aMPV is a highly contagious virus that causes respiratory and reproductive disorders in all poultry but is the most impactful in turkeys

Terminology

The following names are used to refer to the disease caused by avian metapneumovirus.

- Avian Metapneumovirus (AMPV)
- Swollen Head Syndrome (SHS)
- Avian Rhinotracheitis (ART)
- Turkey Rhinotracheitis (TRT)
- Avian Pneumovirus (APV)

Economic impact: aMPV can cause significant economic losses due to decreased egg production, mortality, and treatment costs, especially when secondary infections occur. The reproductive system can be infected and this leads to a drop in egg production.

Etiology and Transmission

- **Virus family:** aMPV is a single-stranded, non-segmented, negative-sense RNA virus belonging to the genus Metapneumovirus, within the family Pneumoviridae
- **Subtypes:** Four major subtypes have been identified: A, B, C, and D, with A and B being most common globally. Most outbreaks experienced are of subtype C, the more recent turkey farm outbreaks significantly impacting turkey weight and livability are caused by subtypes A or B
- In turkey breeders, aMPV can produce egg production declines of 20-100% that last between two and four weeks, which is leading to a shortage of poults. In commercial turkey flocks, mortality rates can range widely, depending on the severity of the outbreak and whether a secondary infection has occurred
- **Transmission:** The virus spreads rapidly through direct contact with infected respiratory secretions via airborne aerosols. Indirect transmission also occurs through contaminated equipment, water, or personnel. High stocking density allows the virus to spread more easily
- **Reservoirs:** Wild birds, especially waterfowl, are considered a natural reservoir and can introduce the virus to commercial poultry farms along migratory routes

Species Affected

While primarily a concern for commercial poultry, aMPV can affect a range of avian species:

- **Highly susceptible:** Turkeys, chickens, and ducks can develop clinical signs, depending on which AMPV subtype causes infection. Whereas AMPV-A and AMPV-B are associated with clinical signs in chickens and turkeys
- **Other birds:** Pheasants, guinea fowl, and various wild birds have also been found to carry the virus

Symptoms and Clinical Signs

Symptoms vary depending on the host species, age, viral subtype, and presence of secondary infections. It being as mild respiratory symptoms such as nasal discharge, tachypnoea and dyspnoea.

Fig:1. Clinical signs in Avian Meta- Pneumovirus

In chickens (Swollen Head Syndrome): AMPV is associated with swollen head syndrome in chickens. This condition is characterised by swelling of the peri- and infraorbital sinuses (see swollen head syndrome image), frothy eyes, nasal discharge, torticollis, and opisthotonos due to ear infection. Typically, <4% of the flock is affected; however, respiratory signs can be widespread. The mortality rate is rarely >2%; it ranges between 0.4% and 50%. In broiler breeders and commercial layers, egg production and quality are frequently affected.

- **Respiratory Signs:** Coughing, sneezing, snickering, and tracheal rales (wheezing or rattling sounds)
- **Lethargy and Anorexia:** Infected birds may appear sick, unthrifty, and lose appetite
- **Ruffled Feathers:** A sign of illness and discomfort
- **Decreased Egg Production:** Older layers may experience a significant drop in egg production
- **Mortality:** Especially severe in older birds and can be exacerbated by bacterial infections
- **Swelling:** Periorbital (around the eyes) and infraorbital swelling that can extend down the neck

Fig: 2. Swelling around the eyes
(Source: google Images)

- **Neurological signs:** Torticollis (twisted neck), opisthotonos (star-gazing), and disorientation may occur due to ear infections
- **Mortality:** While mortality from the virus alone is often low, secondary bacterial infections, particularly with E. coli, can significantly increase death rates
- **Production drop:** The reproductive system can be infected and this leads to a drop in egg production

Diagnosis

Because the clinical signs can resemble other respiratory diseases, definitive diagnosis requires laboratory testing:

- **RT-PCR:** Reverse transcription-polymerase chain reaction is the most common diagnostic method for detecting the viral RNA from tracheal swabs
- **ELISA:** Enzyme-linked immunosorbent assay is used to detect antibodies, which can help in flock surveillance and confirming past exposure
- **Virus isolation:** While possible, isolating the virus in cell cultures is difficult and less common for routine diagnosis

Differential Diagnosis

- Orthopneumovirus, ND/RD
- Avian infectious bronchitis
- Ornithobacterium rhinotracheale
- Mycoplasma gallisepticum

Difference Between ND and SHS

Newcastle disease (ND) is a highly contagious viral disease that can cause respiratory, nervous, and digestive issues with potentially high mortality, while swollen head syndrome (SHS) is a specific condition often caused by the avian pneumovirus, characterised by respiratory signs like sneezing and swollen sinuses. The key difference is that swollen head syndrome is primarily a respiratory issue caused by a different virus (avian pneumovirus), and it can sometimes be one of the clinical syndromes that can accompany a Newcastle disease virus infection.

Table 1: Difference between ND and SHS

Feature	Newcastle Disease (ND)	Swollen Head Syndrome (SHS)
Primary Cause	Newcastle disease virus (NDV)	Avian pneumovirus (APV)
Key Symptoms	- Respiratory distress - Depression - Drop in egg production - High mortality (in severe cases)	- Sneezing and nasal discharge - Swollen infra-orbital sinuses and head - Conjunctivitis
Impact	A serious, often fatal, viral disease affecting the respiratory, nervous, and digestive systems	A specific respiratory disease that can be severe and is often accompanied by other secondary infections
Relationship	Swollen heads can be a clinical symptom of severe Newcastle disease	Can be a stand-alone disease or occur alongside other diseases like infectious bronchitis

Treatment and Prevention

- There is no specific antiviral treatment for aMPV infection, but supportive care can manage symptoms and secondary infections
- **Good Management Practices:** Maintaining a clean and healthy environment, proper ventilation, and dry litter can help reduce the risk of infection and secondary bacterial infections
- **Biosecurity:** Implementing strict biosecurity measures can help prevent the spread of the virus

Treatment of Secondary Infections:

- Antibiotics may be used to control complicating bacterial infections
- **Vaccination:** Live attenuated and inactivated vaccines are available in many countries where the disease is endemic. Vaccination can reduce the severity of the disease and decrease economic losses
- **Biosecurity:** Strict biosecurity measures are essential to prevent the virus's introduction and spread. These include limiting access to farms, proper disinfection protocols, controlling insects and rodents, and providing adequate downtime between flocks
- **Proper management:** Good ventilation, temperature control, and management of litter quality can help minimise the disease's severity

Human Health Significance

Avian metapneumovirus is not known to cause infections in humans. The virus is a distinct species from the human metapneumovirus (hMPV), which causes respiratory illnesses in people, though hMPV is most closely related to aMPV subgroup C.

Conclusion

Avian metapneumovirus (aMPV) is a major emerging respiratory pathogen in poultry, worldwide, causing an acute and highly contagious infection of the upper respiratory tract in chicken and turkeys (turkey rhinotracheitis) and many other avian species, including chickens (swollen head syndrome). 6 subtypes (A, B, C, D, and 2 new subtypes) have been identified. Infection spreads rapidly between birds. Wild birds can be infected and they are suggested as probable links.

Affected birds exhibit nonspecific symptoms and lesions dominated by an acute inflammation of the upper respiratory tract and swollen heads. The virus can induce a decrease in egg production and poor eggshell quality that cause huge economic losses to the poultry industry. Diagnosis of aMPV infection is performed by ELISA tests and molecular methods (RT-PCR). Application of rigorous biosecurity and vaccination programs are crucial and effective for the control of turkey rhinotracheitis. Different types of vaccines are used, with satisfactory protection offered by live attenuated and inactivated vaccines.

UNLOCKING LAYER POULTRY POTENTIAL OF THE NORTH-EAST

Focusing on policy interventions and region-specific opportunities, **Prof. (Dr.) P.K. Shukla**, Department of Poultry Science, College of Veterinary Science and Animal Husbandry, Mathura; Chairman, Scientific Panel 13 of FSSAI on Meat and Meat Products including poultry and President, Indian Poultry Science Association, in an IPR exclusive evaluates and outlines a forward-looking roadmap for strengthening the layer poultry sector in North-Eastern Indian states for sustainable development and self-sufficiency

Abstract

This article reviews the current status of the layer (egg) poultry sector in the eight North-Eastern (NE) states of India, identifies challenges and opportunities unique to the region, and summarises central and regional government policies, subsidies and schemes relevant to layer producers. The NE region presents a mixed picture: strong cultural reliance on backyard poultry, growing commercialisation in pockets, favourable consumer demand for eggs, but persistent structural constraints — difficult terrain, fragmented holdings, feed and hatchery gaps, weak value chains and vulnerability to transboundary disease events. Targeted policy interventions (National Livestock Mission, regional funding via the North Eastern Council, state-level initiatives and central subsidy programmes) exist but require tailoring and improved delivery for NE realities. The article concludes with prioritised, implementable recommendations to strengthen sustainable, climate-resilient layer production and inclusive value chains across the North-East.

1. Introduction and rationale

India is one of the world's leading egg producers, with commercial egg production growing rapidly over the last two decades. Poultry, and specifically layer production, plays a critical role for rural livelihoods, nutrition security and small-scale entrepreneurship. The North-East Region (NER) of India (Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and Sikkim) has a distinct agro-ecological, socio-cultural and institutional profile compared to the rest of the country. This review collates recent evidence on layer sector status in the NE, highlights region-specific problems and potential, and synthesises central and regional schemes applicable to layers. The objective is to provide an evidence-informed base for policymakers, extension agencies, NGOs and private investors interested in strengthening egg production and value chains in the North-East.

2. Current status: production, structure and trends

2.1 Scale and structure of layer production in the North-East

Poultry production in the NE has historically been dominated by backyard and small household flocks, with slow but visible commercialisation in select states and peri-urban pockets. Recent studies and government statistics indicate that while the NE's contribution to national egg volumes remains modest compared to major producing states, the region has recorded higher-than-national growth rates in poultry population in some states (for instance Assam, Meghalaya and Sikkim) over the last two decades. This indicates latent capacity for expansion if structural constraints are addressed.

2.2 Production systems: backyard, semi-commercial and commercial layers

Layer systems in the NE can be broadly classified as:

- Backyard/subsistence flocks: low-input, scavenging or semi-scavenging birds (often native breeds), primarily for household consumption and small-scale sale
- Semi-commercial units: small house flocks of 50–1,000 birds, usually reared by entrepreneurs using mixed local and improved strains with partial commercial inputs
- Commercial layer farms: larger operations (1,000+ birds) with commercial layer strains, structured feed regimes and market orientation. These are concentrated in a few districts with better connectivity and access to inputs

The relative dominance of backyard systems in many districts limits economies of scale but provides resilience and broad livelihood coverage.

2.3 Market and consumption patterns

Egg consumption in the NE is growing, driven by rising incomes, urbanisation and increased awareness of eggs as a low-cost source of protein. Local consumer preference for fresh, small-scale ('country'/desi) eggs in some states coexists with demand for uniform commercial table eggs in cities. Local value chains are often short (producer to local market), but there is increasing interest in cold-chain-enabled aggregation for urban supply. Industry analyses also highlight periodic price volatility at the national level (feed cost driven), which transmits to regional producers and affects margins.

3. Challenges unique to the North-East

While many constraints facing NE layer producers mirror national problems (feed price volatility, disease risk, credit constraints), the region also confronts specific, geographically and socio-economically rooted challenges:

3.1 Geographic isolation, fragmented markets and poor connectivity

The NE's hilly terrain, sparse road networks in many districts, and long distances to major consuming markets increase transport costs for inputs (day-old chicks, feed, medicines) and outputs (eggs). This raises per-unit costs and reduces competitiveness of NE producers relative to producers in plains states. Seasonal road blockages during monsoons amplify unpredictability. The region's fragmented markets and small district-level volumes limit attraction for large private processors or integrators.

3.2 Feed availability and cost structure

Economies of scale in feed milling are weak due to low local cereal oilseed production and limited bulk buyers; most compound feed ingredients (maize, soybean) must be transported from distant states, adding logistics cost. Feed constitutes the single largest input cost for layers; volatile maize and soybean prices at the national level, therefore, have a pronounced effect on NE farm profitability. There is also limited availability of quality feed formulations tailored for smallholders and local conditions.

3.3 Lack of local hatcheries and improved germplasm access

Quality day-old layer chicks and parent stock are often supplied from other regions, increasing cost and mortality risk during transport. The absence of reliable local hatcheries limits the proliferation of standardised commercial layer operations and breeds adapted to local disease, climate and feed scenarios.

3.4 Infrastructural gaps: cold chain, egg-grading and processing

Egg grading, packing, cold storage and value-added processing (e.g., pasteurised liquid eggs, powdered eggs) are underdeveloped. Weak cold chain infrastructure restricts longer-distance aggregation and supply to large urban markets, and increases post-harvest losses.

3.5 Institutional capacity, extension and skilled labour shortage

Many NE districts lack sustained veterinary extension services focusing on poultry; technical knowledge of modern layer management (nutrition, house design, vaccination schedule, litter management) remains limited. Skilled farm workers and managers are scarce, and training programmes are not uniformly available.

3.6 Disease risk and biosecurity challenges

Transboundary and local disease outbreaks (Newcastle disease, avian influenza) can cause sudden flock losses, market closures and consumer demand shocks. In smallholder systems, biosecurity measures are often weak due to lack of awareness and resource constraints.

3.7 Financial and credit constraints

Access to institutional finance for small and medium poultry entrepreneurs is limited. Formal credit often requires collateral

and recognised business documentation, which small producers may lack. While several central schemes provide subsidies, navigating application procedures and meeting documentation requirements is a challenge for many rural entrepreneurs.

3.8 Social and cultural factors

In some tribal and indigenous communities, cultural practices and preferences for native poultry breeds shape production choices. While this sustains biodiversity and local food systems, it may slow adoption of high-yield commercial layers without careful, culturally sensitive extension.

4. Opportunities unique to the North-East

Despite challenges, the NE presents distinctive opportunities for layer sector development — many of which are under-exploited and well aligned with regional development priorities:

4.1 Rising local demand and improved consumption patterns

Urban centres in the NE (Guwahati, Imphal, Shillong, Aizawl, Agartala) show increasing per capita egg consumption. Localised demand growth creates market pull for aggregated supply chains and medium-scale layer farms.

4.2 Niche markets: indigenous/organic/cage-free eggs and premiumisation

There is market potential for region-branded eggs (free-range 'desi' eggs, organic eggs, backyard lineage eggs) appealing to health- and quality-conscious urban consumers and tourists. Premiumisation can improve producer margins if supported by certification and marketing.

4.3 Value addition and local processing

Establishing small-scale egg processing (pasteurisation, packing, value-added products) near demand centres can reduce transport losses and open new markets (institutional buyers, hotels, bakeries). Regional processing hubs could be a target for NEC or state investments.

4.4 Integration with diversified smallholder livelihoods

Poultry, including layers, can be effectively integrated into mixed farming systems (horticulture, piggery, fisheries) common in the NE, increasing resilience and household nutrition. Poultry manure can support high-value horticulture, creating circular benefits.

4.5 Potential for clustered development and co-operatives

Given the fragmented nature of holdings, promoting producer groups, cooperatives and cluster-based models (backyard to semi-commercial clusters) can aggregate demand for feed and services, reduce per-unit costs, and improve bargaining power with buyers.

4.6 Government instruments and regional funds (enabling environment)

Several national and regional schemes (discussed below) provide subsidy windows, enterprise development support, and infrastructure funding which, if targeted correctly, can accelerate layer sector growth in the NE.

5. Government policies, subsidies and schemes relevant to the layer sector

Strengthening the NE layer sector requires aligning national schemes with regional needs and ensuring effective state implementation. Below are the principal central and regional programmes, with implications for layers.

5.1 National Livestock Mission (NLM) — poultry focus and entrepreneurship support

The National Livestock Mission (revised and realigned in recent years) promotes entrepreneurship in livestock including poultry, supports breed improvement, feed development, veterinary services and infrastructure. NLM components include financial assistance for setting up small and medium poultry units, capacity building, and facilitating access to improved germplasm. These measures are directly relevant to expanding layer capacity in the NE, especially by supporting small entrepreneurs and cooperative models.

5.2 Centrally sponsored schemes for poultry and allied activities (subsidies for units)

At central and state levels certain subsidy programmes provide partial capital cost assistance for setting up poultry houses, hatcheries, feed mills, and cold-chain infrastructure. Specific subsidy rates and ceilings vary by scheme and beneficiary category (SC/ST/JJ clusters, women, SHGs). Some state governments (outside the NE) have introduced interest subvention or reimbursement for commercial layer establishments; similar models could be replicated in NE states with suitable modifications. (Example: interest reimbursement models in some states to promote commercial layer farms).

5.3 North Eastern Council (NEC) and region-specific funding

The NEC is the statutory regional planning body for the NE and funds projects in agriculture and allied sectors, including infrastructure development, value addition and small-scale agro-processing. NEC project financing can be used to establish regional hatcheries, feed mills, cold chain facilities and market linkages tailored to NE states' geography. The NEC's role is particularly important to finance projects that have high public good elements (regional aggregation hubs, logistics corridors) which private players may not find immediately profitable.

5.4 Schemes under the Ministry of Fisheries, Animal Husbandry & Dairying (DAHD) and state veterinary departments

DAHD's annual plans and mission mode schemes often include support for poultry hatcheries, transportation subsidies for germplasm, insurance windows for livestock, and breeder farm support. States' animal husbandry departments (e.g., Assam) also run poultry development projects and maintain state-run poultry/duck farms which provide extension and breeding services. Effective coordination between central schemes (NLM, other centrally sponsored programmes) and state implementation is necessary to ensure ground-level delivery in the NE.

5.5 Recent central policy context and risk mitigation measures

Industry analyses and government advisories in recent years have emphasised the need for contingency planning for disease outbreaks (avian influenza), feed buffer strategies and market stabilisation measures. Central research and extension institutions provide technical advisories that states can adapt. Private sector players are also urged to participate in building local capacity (contract hatcheries, feed distribution networks) in underserved regions.

6. Synthesising policy gaps and implementation bottlenecks

Although multiple schemes exist, NE producers face three common implementation bottlenecks:

1. Mismatch between scheme design and local scale: Many central subsidy programmes are designed for larger unit sizes or require documentation hard for smallholders, limiting uptake by backyard and semi-commercial producers
2. Delivery challenges: Complex application processes, limited awareness, and weak institutional outreach hinder actual

subsidy disbursal and technical assistance at the village level
3. Coordination shortfalls: Lack of coordination among central ministries (agriculture, fisheries & animal husbandry), NEC, state departments and private partners reduces the potential of cluster-level interventions

Addressing these requires administrative simplification, decentralised implementation and active engagement of producer organisations.

7. Recommendations — pathways to strengthen layer sector in the NE

Based on the status, challenges and policy instruments described, the following practical recommendations are proposed:

7.1 Promote cluster-based, smallholder aggregation models

Design NEC-backed or state-supported cluster projects that group backyard and semi-commercial producers (e.g., 200–500 households) around a hub providing day-old chicks, feed bulk purchase, vaccination services, egg grading/packing and market linkages. Clusters lower transaction costs, enable economies of scale in feed and input procurement, and make cold-chain investments viable.

7.2 Invest in local hatcheries and adaptable germplasm programs

Support establishment of small to medium hatcheries in strategic locations (close to major consumption centres and within transportable distances) using NEC/NLM funds and public–private partnerships (PPP). Parallel research on strains adapted to local climates and local feed resources will improve survivability and performance.

7.3 Strengthen feed availability and alternative feed research

Encourage development of small-scale feed mills and feed formulation units under subsidy or soft-credit windows, and promote research on local alternative feed resources (rice polish, fish meal from local fisheries, locally available oilseed by-products) to reduce dependence on distant maize/soybean. Demonstration trials and feed entrepreneur training are essential.

7.4 Improve cold-chain and value-addition infrastructure

Target investments (NEC/State/NLM) to establish graded egg packing centres, cold storage at district aggregation points and value-addition facilities (pasteurisation, dried eggs) to reduce losses and open institutional markets (hotels, bakeries). Public investment can be catalytic to attract private aggregation services.

7.5 Simplify scheme access and strengthen extension delivery

Streamline application procedures for subsidies, use mobile/online grievance and application tracking, and deploy trained para-veterinary extension agents dedicated to poultry. Use demonstration farms and farmer field schools to accelerate adoption of modern layer management practices.

7.6 Financial inclusion and tailored credit products

Promote microfinance products, group lending (SHG/cooperative linked), and interest subvention for small layer entrepreneurs. Encourage NBFCs and rural banks to design poultry-specific loan products with grace periods matching production cycles.

7.7 Biosecurity and disease surveillance networks

Establish regionally coordinated disease surveillance, rapid response units and farmer training on basic biosecurity measures (quarantine, vaccination schedules), supported by central contingency funds. Guarantee compensation clarity during culling outbreaks to reduce under-reporting.

7.8 Market development and branding

Support 'North-East' or state-level branding for indigenous/free-range eggs to capture premium markets and tourism demand. Facilitate linkages with institutional buyers (airlines, hotels, hotels in hill stations) and e-commerce platforms for egg sales from verified producers.

8. Implementation roadmap and priorities

For policymakers and implementers, a staged approach is recommended:

- Short term (1 year): Rapid mapping of producer clusters; pilot cluster projects in 3–4 districts (one per sub-region); launch targeted training and veterinary outreach; simplify subsidy application processes at state level
- Medium term (2–3 years): Establish 3–5 regional hatcheries and small feed mills; deploy district-level egg aggregation and cold storage; scale promising pilot clusters; institutionalise producer cooperatives and link to market players
- Long term (4–5 years): Strengthen integrated value chains (processing, branding), encourage private investment in logistics, and mainstream NE layer production into national supply chains while maintaining niche premium product lines

NEC, DAHD/NLM and state animal husbandry departments should form a joint technical committee for coordinated planning and monitoring.

9. Conclusion

The North-East of India contains significant untapped potential for development of a resilient layer poultry sector that supports rural livelihoods, enhances nutrition and catalyses micro-enterprise growth. While structural constraints — terrain, feed supply, hatchery gaps, weak cold chains and institutional bottlenecks — currently limit expansion, a policy mix that combines cluster development, regional infrastructure investment (hatcheries, feed mills, cold chains), simplified subsidy access, capacity building and market development can unlock sustainable growth. Regional institutions such as the North Eastern Council, working with central schemes (National Livestock Mission and other allied supports) and proactive state implementation, can deliver the enabling environment for an inclusive and climate-smart layer sector in the North-East.

References (selected)

1. *Anand, K.G. Indian Poultry - Past, Present & Future (seminar notes) — statistics on national egg production and industry overview.*
2. *VeterinaryPaper.com — Livestock sector in north-eastern region of India (2025) — regional poultry population trends and NE-specific data.*
3. *Department of Animal Husbandry & Dairying (DAHD) — Annual Report 2023–24 (government policy context and schemes overview).*
4. *National Livestock Mission (NLM) — operational guidelines and scheme components relevant to poultry entrepreneurship (breed improvement, infrastructure).*
5. *ICRA / industry analyses — Indian poultry industry recent dynamics, feed price impacts and market volatility (industry note).*
6. *North Eastern Council (NEC) — agricultural and allied sector project support guidelines (regional planning body role).*

Article

Applications of Butyric Acid in Poultry Nutrition

Dr. Partha P. Biswas
F.Z.S.,F.Z.S.I.
Former Associate Professor & H.O.D.,Dept. of Zoology
R.K. Mission V.C. College
Kolkata

In modern commercial broiler operations, birds endure many stresses from intensive rearing and high stocking densities that impair immune response and gut health. These factors also raise their susceptibility to disease and mortality. To limit such losses, antibiotics were widely included in feed. But antibiotic residues in poultry products pose significant public health risks and contribute to the global rise of antimicrobial resistance. With increasing consumer demand for antibiotic-free meat and bans on antibiotic growth promoters, the poultry feed sector is actively looking for alternative options. Organic acids, especially butyric acid, are increasingly used because they provide many benefits for poultry health, performance, and egg quality when included in feeds making them a viable substitute for antibiotics in livestock production systems. Butyric acid is particularly effective against harmful bacteria such as Salmonella spp. and Escherichia coli, while also promoting the growth of beneficial gut bacteria. It serves as a key energy source for colonocytes and enhances the differentiation and maturation of intestinal cells. Overall, butyric acid should be regarded as a potential alternative to antibiotic growth promoters, as it diminishes pathogenic bacteria and their toxins, thereby improving gut health, increasing nutrient digestibility, and ultimately leading to enhanced growth performance and immunity in birds.

The Chemical Nature of Butyric Acid

Butyric acid is one of the short short-chain fatty acids (SCFAs). Such organic acid is generated at millimolar levels in the bird caecum, which is the major site for microbial fermentation of unabsorbed starch. Butyric acid in its unprotected form is rapidly absorbed in the upper gastrointestinal tract (GIT), suggesting that protection is needed to positively affect the small intestine. Various forms of butyric acid (salts such as sodium butyrate, coated salts, and butyric acid glycerides) are utilised in poultry practice, each differing in effectiveness, bioavailability, stability and targeted release within the gastrointestinal tract. To prevent rapid absorption in the crop and upper small intestine, salts are often coated or microencapsulated with fats (like palm stearin or vegetable fats). This sustained-release technology allows the butyric acid to be released gradually along the entire intestinal tract, including the distal segments and caeca where it is most needed to combat pathogens and support gut health.

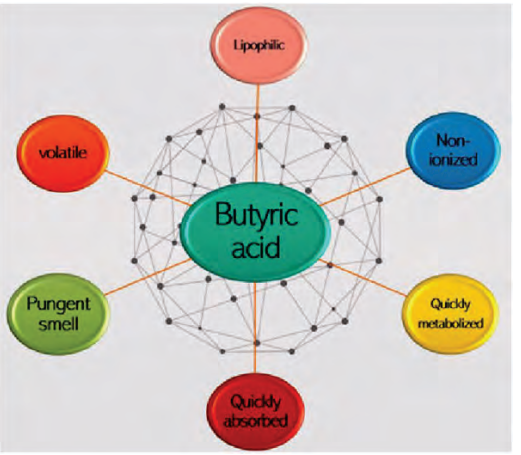


Fig.1: Properties of Butyric acid

Benefits of Butyric Acid

Antimicrobial Effect

Organic acids inhibit pathogenic bacteria by entering the lipid-rich bacterial cell wall in their non ionised form. Once inside the neutral cytosol they dissociate, releasing protons and anions. The resulting build-up of anions and lowered internal pH disrupts purine bases, denatures key enzymes, and leads to bacterial cell death.

Effect on pH of Intestinal Digesta

Sodium butyrate lowers the pH of intestine that favours the growth of lactic acid generating bacteria such as Lactobacilli spp. as they require an acidic medium for their growth. According to reports, harmful bacteria in the intestine struggle with lactic acid-producing bacteria for nutrition and space. Lactobacilli spp. creates bacteriocins which control the harmful bacterial level and maintain a healthy environment in the bird's intestine.

Effect on Immunity

Since the primary causes are unknown, the immune response in hosts fed organic acids (OAs) such as butyric acid may be modulated for a variety of reasons. Nonetheless, the immuno-potentiating effects of OAs on poultry have been demonstrated in multiple studies. The weights of the immune organs of broiler

chicks have been increased in response to OA supplementations. Moreover, the levels of serum immunoglobulin (Ig) were elevated following the dietary feeding of layer chickens on OAs mixture and yeast culture. For example, chickens given OA supplements demonstrated improved immune responses and increased antibody titers against infection with the Newcastle disease (ND) virus. Furthermore, it has been shown that broiler chickens given the avian influenza (AI) (H9N2) virus vaccine in addition to a diet containing OAs had higher percentages of cluster of differentiation (CD4+), CD25+, and T-cells.

Effect on Mineral Absorption

In general, acidification of feed increases calcium absorption in intestine by decreasing the pH of digesta, in turn inhibiting phytic acid from formation of calcium-phytate complex. Butyrate induces absorption of water and sodium. Earlier works with BAG (Butyric Acid Glycerides) supplemented in broiler ration increased serum calcium level. The latter findings also documented increased serum phosphorus.

Antioxidant Effect

Dietary inclusion of various forms of butyric acid increases serum superoxide dismutase (SOD) activity and decrease malanoldehyde (MDA) content suggesting enhanced capacity of scavenging free radicals and decreased damage of tissues or cells. Catalase is one of the key defence systems against oxidative stress which is also found to be elevated due to inclusion of various forms of butyric acid.

Effect on Intestinal Integrity

Butyrate has been shown to improve the morphology of the small intestine in a variety of forms. These changes in epithelial anatomy may lead to better intestinal integrity and less antigen penetration into the bloodstream. The surface area of the intestinal villi may increase, which is associated with a higher rate of mucosal cell proliferation. The inclusion of butyrate has been demonstrated to promote the growth of intestinal epithelial cells and increase the thickness of the lining of the intestines. The increase in blood flow and synthesis of hormones of the gastrointestinal system could be responsible for the improved intestinal condition. Furthermore, butyrate was shown to increase the production of peptides that might cause enterocyte proliferation, resulting in an increase in the number of cells, effective restoration of injured mucosa, and increased villi height.

Effect of Butyric Acid on Carcass Characteristics in Broilers

It is clear from findings that inclusion of BA in broiler diet improves the weight of carcass indicating anabolic effect in broiler chicken. Probably supplementation of BA in broiler diets improved the concentration of volatile fatty acids, and restricted the growth of microbes facilitating utilisation of dietary nutrients more efficiently for higher growth and FCR.

Improved Egg Quality

In layer farming, both egg production and egg quality are economically important. Better egg quality means stronger shells while keeping a desirable egg size. Calcium, a key part of the layer diet, is absorbed in the small intestine and used to form both eggshell and bone. Organic acids enhance mineral uptake by lowering digesta pH and preventing calcium-phytate complexes. Supplementing butyric acid or its salts (such as sodium butyrate) has been shown to raise serum levels of calcium, phosphorus, and magnesium. Research indicates that adding butyrate at 285 mg/kg can improve eggshell strength and reduce misshapen eggs in older hens. They reported beneficial effects of organic acids on certain eggshell quality traits in older birds, likely through improved calcium absorption.

Fig. 2: Effect of butyric acid and its salts to enhance the growth performance of poultry

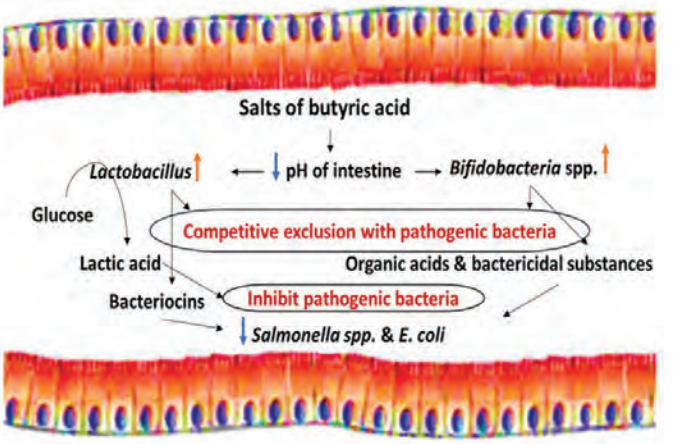


Fig. 3: Indirect bactericidal effects of butyric acid

Conclusions

Various butyric acid products are marketed to support gut health and reduce unpleasant odours. Glyceride-based butyrates appear to be the most effective. Research indicates butyrate glycerides strongly promote intestinal health by strengthening gut barrier function and increasing microbiota diversity, which together boost poultry growth. Free butyric acid has a strong, rancid odour and an acrid, unpleasant taste. The best way to mask its taste and smell in poultry supplements is to use coated or encapsulated commercial formulations that bypass the bird's taste receptors and release the active compound in the lower gut. Recent studies also associate butyrate glycerides with improved carcass quality by affecting genes tied to fat deposition and by encouraging Bifidobacteria growth in the caecum, suggesting promising future uses.

References :

1. *M. Mazur-Kuśnirek et al (2024): Different forms of butyric acid in poultry nutrition – a review. J. Anim. Feed Sci.; 33(3):270-280.*
2. *Leeson, S.et al (2005): Effect of butyric acid on the performance and carcass yield of broiler chickens. Poult. Sci, 84, 1418–1422.*
3. *JinWang Hou et al (2024): Effects of coated sodium butyrate on the growth performance, serum biochemistry, antioxidant capacity, intestinal morphology, and intestinal microbiota of broiler chickens. Front. Microbiol. Volume 15 | https://doi.org/10.3389/fmicb.2024.1368736*

ROSS 308 AP

PREFERRED CHOICE FOR BROILER INTEGRATORS

BEST
MARKETABLE BIRD
1st Choice for Consumers, Retailers and Traders

EXCELLENT
BROILERS RESULTS
Good Broiler Performance across the year

UNMATCHED
BREEDER PERFORMANCE
More chicks per parent stock

SCAN
to learn more about the Ross 308 AP in India.

Aviagen India
BREEDING SUCCESS TOGETHER

ROSS
An Aviagen Brand

AVIAGEN INDIA POULTRY BREEDING COMPANY PRIVATE LIMITED
+91 74837 21180 • indiasales@aviagen.com • www.aviagen.com

ROSS 308 AP BEST ACHIEVERS DECEMBER-2025

Aviagen INDIA

Northern Region

COMPANY: Sampoorna Feeds
FARMER NAME: Mr. Nirmal Singh

DECEMBER-2025	Top #1
Farm Type	Open House
State	PUNJAB
Chicks Placed	3260
Mean Age	32.0
Avg Body Wt	2386
FCR	1.370
cFCR	1.284
Livability%	96.1
Daily Gain	74.6
EPEF	523.0

Eastern Region

COMPANY: IB Group
FARMER NAME: Ms. Nilima Roy

DECEMBER-2025	Top #1
Farm Type	Open House
State	BENGAL
Chicks Placed	1288
Mean Age	41.0
Avg Body Wt	3084
FCR	1.433
cFCR	1.192
Livability%	95.7
Daily Gain	75.2
EPEF	502.5

Central Region

COMPANY: Japfa
FARMER NAME: Mr. Ankush Baban Jagadale

DECEMBER-2025	Top #1
Farm Type	EC House
State	MAHARASHTRA
Chicks Placed	6788
Mean Age	33.6
Avg Body Wt	2494
FCR	1.386
cFCR	1.276
Livability%	96.3
Daily Gain	74.1
EPEF	515.0

South Region

COMPANY: SKM
FARMER NAME: Ms. Dhivya Ayilam

DECEMBER-2025	Top #1
Farm Type	EC House
State	TAMILNADU
Chicks Placed	22490
Mean Age	32.2
Avg Body Wt	2210.0
FCR	1.340
cFCR	1.293
Livability%	97.1
Daily Gain	68.6
EPEF	497.3

DECEMBER-Top PERFORMANCE BY AREA

Area	Chicks Placed	Mean Age	BW	FCR	cFCR(2Kg)	Livability%	Daygain	EPEF
North EC House	5082	40.0	3147	1.590	1.335	95.8	78.7	474.0
North Open House	3260	32.0	2386	1.370	1.284	96.1	74.6	523.0
East EC House	10991	36.0	2658	1.503	1.357	95.6	73.8	469.8
East Open House	1288	41.0	3084	1.433	1.192	95.7	75.2	502.5
Central EC House	6788	33.6	2494	1.386	1.276	96.3	74.1	515.0
Central Open House	6228	33.1	2418	1.407	1.314	96.5	73.0	501.1
South EC House	22490	32.2	2210	1.340	1.293	97.1	68.6	497.3
South Open House	1860	33.5	2390	1.420	1.333	96.9	71.4	487.3

DECEMBER-Top 10 FIELD PERFORMANCE

Flock	Farm Type	State	Chicks Placed	Mean Age	BW	FCR	cFCR	Livability%	Day Gain	EPEF
Flock 1	OPEN HOUSE	PUNJAB	3260	32.0	2386	1.370	1.284	96.1	74.6	523.0
Flock 2	OPEN HOUSE	PUNJAB	4960	31.6	2334	1.380	1.306	97.0	73.9	519.4
Flock 3	OPEN HOUSE	HIMACHAL PRADESH	8929	36.6	2854	1.440	1.250	96.0	77.9	519.4
Flock 4	EC HOUSE	MAHARASHTRA	6788	33.6	2494	1.386	1.276	96.3	74.1	515.0
Flock 5	EC HOUSE	MAHARASHTRA	9979	32.3	2348	1.369	1.292	97.1	72.6	514.9
Flock 6	OPEN HOUSE	PUNJAB	8168	35.2	2667	1.430	1.282	96.1	75.7	508.5
Flock 7	EC HOUSE	MAHARASHTRA	13820	33.4	2428	1.400	1.305	97.2	72.8	505.3
Flock 8	OPEN HOUSE	PUNJAB	3506	31.2	2302	1.390	1.323	95.0	73.8	504.0
Flock 9	EC HOUSE	MAHARASHTRA	8695	32.4	2246	1.347	1.292	97.7	69.4	503.2
Flock 10	OPENHOUSE	PUNJAB	9694	36.1	2673	1.430	1.280	97.1	74.1	503.0

Insight to Impact

Turning Poultry Pest Challenges into a Performance Breakthrough at a 1.2-Lakh Breeder Farm. A veterinarian's data-driven discipline and Envu's precision science restore order in one of Karnataka's leading breeder operations.

When the Night Looked Calm but the Numbers Fell

By midnight, the sheds were still. Fans turned steadily, and the rhythmic sound of feeders filled the air. Yet every morning, the spreadsheets on Dr. Srinivas's desk told another story. Egg counts had dropped again, hatchability had slipped, and several technicians were complaining of sleepless nights.

Bed bugs, red mites, and houseflies-small, persistent, and mostly invisible were quietly eroding performance at a 1.2 lakh-bird breeder farm near Dodballapur in Bengaluru Rural District. For Dr. Srinivas, a veterinarian who had built his enterprise on measurement and discipline, the losses were more than operational. "Everything looked normal until we saw the data," he said. "The losses came from what we could not see"

He had entered poultry farming in 1994 after a short stint in veterinary sales, determined to apply scientific management to an industry often guided by habit. Over three decades, he created a closed-loop enterprise of brooding, growing, and laying units on raised platforms, supplying hatchable eggs and day-old chicks across southern India and the North East. Success for him had always meant predictability: healthy birds, efficient feed

conversion, and consistent customer satisfaction.

When Hidden Threats Disrupted a Perfect System

The problems began after a major upgrade. In 2002, the farm shifted from deep-litter to cage systems. The change improved hygiene but also created hidden joints and crevices where ectoparasites could thrive. Within months, the numbers faltered.

Production, which should have remained near 8,400 eggs per 10,000 birds, fell to about 6,000. Hatchable egg selection, once 96-97%, dropped to 78-80%. Feed conversion, normally~285 g per hatchable egg, worsened by 20-30% even though feed accounts for around 80% of total cost. Mortality rose from 2-3% to 8-11%. Birds became restless, fertility declined, and many workers left after nights of insect bites.

Conventional fixes brought little relief. Chemical dosing through drinking water reduced infestation briefly but lowered production by 10-15%. Generic sprays achieved less than 5% control. "I had lost confidence," Dr. Srinivas recalled. "Every product promised results, yet none solved the problem."

Losses spread across every key measure-feed efficiency, hatchable quality, and labour stability. The solution, he realised, required a change in method that would address the source rather than the symptoms.

Precision Control and the Return of Order

Relief arrived through an encounter at an industry exhibition. Envu specialists suggested that instead of internal dosing, the farm needed precision external spraying with verified coverage. They recommended Temprid, a contact adulticide, together with detailed application protocols and post-spray audits.

Dr. Srinivas agreed to a controlled trial. Within 24 hours, nearly 90% of bed bugs were eliminated. After a second spray, the sheds stayed clear for months. Calm returned among birds, and confidence returned among workers. "That first spray was a turning point," he said. "It proved that science, applied correctly, could restore stability."

He then formalised a system that targeted every life stage of the pest. Adult insects were managed with Temprid for immediate and residual control. Larval breeding sites in litter and manure were treated with Bilarv, a larvicide that achieved 100% control within a day. Pre-monsoon preventive rounds and post-treatment inspections became part of routine operations. The results were measurable and sustained.

Feed efficiency alone reshaped profitability. In breeder production, where feed represents four-fifths of total cost, recovering the FCR margin changed viability within a single cycle. Hatchable quality returned to benchmark levels, mortality normalised, and longevity extended to 70-72 weeks, adding six weeks of profitable lay. Workers returned, and customers reported stronger chick quality and a reliable supply.

Lessons from a Difficult Season

For Dr. Srinivas, the episode confirmed that unseen problems demand close observation. "If the numbers look fine by day but hatchability keeps falling, check again at night," he now tells other farmers. "That is when the real story shows".

He treats ectoparasite control with the same seriousness as feed formulation and vaccination. Each flock is inspected after dark and audited after every treatment. Every adjustment now follows inspection records rather than routine habit.

The experience also changed how he views partnership. "What mattered was the combination of good products and continuous follow-up," he said. "The visits, data checks, and training ensured that each application was correct."

Nearby farms have faced similar fly pressures, and Dr. Srinivas believes that systematic adult and larval control can help them prevent those seasonal surges. He often summarises his learning simply: "Precision means targeting pests, not birds, and applying products only where they are needed."

Vigilance and the Next Frontier

Even after recovery, vigilance remains essential. Red mites continue to challenge the industry. They are smaller, spread faster, and are harder to detect. Dr. Srinivas follows Envu's ongoing research on new molecules and resistance management, convinced that future progress in breeder health will depend on continued innovation in pest science. His team now performs pre-monsoon inspections and keeps digital records of pest sightings to anticipate outbreaks rather than react to them.

Today the sheds are quiet again. Birds feed normally, workers rest through the night, and production remains steady at target levels. The calm reflects discipline, training, and scientific consistency. For Dr. Srinivas, the lesson is clear: knowledge and structure remain the best defence against unseen threats.

Metric	Before / Under Infestation	After Envu Protocol	Impact That Matters
Egg Production (per 10,000 birds)	≈ 6,000 (vs target 8,400)	≈ 8,400 (80–85%)	Output and revenue restored
Hatchable Selection	78–80% (vs 96–97%)	85–90% consistent	+10–12 points in quality gain
Feed Conversion (FCR)	20–30% worse than standard	285 g per hatchable egg or 330 g per day-old chick	Feed ≈ 80% of cost; profit recovered
Mortality	8–11%	2–3%	Flock health restored
Longevity (Culling Age)	66–68 weeks	70–72 weeks	+6 weeks productive life
Labour Retention	Workers leaving after bites	Stable workforce with comfortable sleep	Operations continued smoothly
Community Impact	Fly complaints in monsoon	Controlled with Bilarv + Temprid	Licence to operate preserved

ROSSARI
making you more competitive

MSG GUARD

A BLEND OF MONO, DI & TRIGLYCERIDES OF BUTYRATES

- Promotion of long Term Immune modulation
- Synergistic action for Gut Health
- Progressive & Sustained release of Butyric acid through out the GIT
- Enhanced Nutrient Absorption
- Holistic antibacterial Protection

ROSSARI BIOTECH LIMITED
(An ISO 9001:2015 & 14001:2015 & GMP Certified Company)
Rossari House, Golden Oak, LBS Marg, Surya Nagar, Opp. Mahindra Showroom, Vikhroli (West), Mumbai - 400079, Maharashtra, India.
info@rossari.com +91 22 6123 3800 www.rossari.com

Avitech

Knowledge | Nutrition | Innovation

Heat Stress ↓
Performance ↑

Avilyte®

Electrolyte Supplement

- Zero ionic balance for optimum DEB and pH
- Monovalent ions for quicker replenishment
- Low osmolarity (<250 mOsm) for faster absorption

Avilyte FS® | Feed Supplement

- Controlled electrolyte supplementation in contract growing/ integrated operations
- Thermostable through pelleting process

Avilyte WS® | Water Soluble Supplement

- Quick replenishment of ions and energy through water
- Can be administered at farm level

Avitech Nutrition | info@avitechnutrition.com | www.avitechnutrition.com

IPR Espresso

INTERNATIONAL

USSEC CRUSHCON Dubai Spotlights Growing MENASA Appetite for U.S. Soy

The U.S. Soybean Export Council (USSEC) – Middle East, North Africa and South Asia (MENASA) recently hosted its flagship CRUSHCON in Dubai, bringing together key decision-makers from the poultry, aquaculture, edible oil and allied sectors across South Asia, the Middle East and North Africa. Centred on the theme Connect, Collaborate and Catalyze, the forum enabled customers to exchange insights on global trade, supply-chain derisking, sustainability and the role of artificial intelligence in data-led decision-making.

Speakers projected a positive outlook for soymeal demand, supported by robust poultry sector growth, while also highlighting cautious optimism around AI adoption and rising interest in sustainable agriculture. "USSEC continues to foster relationships and build trust in international markets on behalf of U.S. soy farmers," said CEO Jim Sutter, calling CRUSHCON a vital platform to understand customer needs and demonstrate the value of U.S. Soy.

The event underscored MENASA's surging demand for U.S. Soy. Pakistan reopened imports after a two-year hiatus, purchasing 844,000 MT so far, while Bangladesh committed to buying USD 1.25 billion worth over the next 12 months. Egypt emerged as the world's third-largest importer of whole U.S. soybeans in MY 2024-25, and Morocco ranked ninth for U.S. soymeal.

Data-driven sessions showcased U.S. Soy's "4Ds" advantage—drier beans, higher digestibility, lower damage and zero deforestation reinforcing its reputation as a consistent, reliable and value-driven ingredient for the region's growing feed and food industries.

NATIONAL

IPEMA–Poultry India Delegation Visits Kesla

An IPEMA–Poultry India team, led by President Uday Singh Bayas, undertook a two-day field visit to Kesla village, Madhya Pradesh to engage with KPS-Kesla Poultry Society and MPWPCL– Madhya Pradesh Women Poultry Producers Company Pvt. Ltd. The visit spotlighted a nationally significant example

of community-owned, women-led poultry development that seamlessly blends grassroots empowerment with professional management and industrial-scale efficiency.

The Kesla poultry initiative, which began in 1993 as a livelihood intervention for landless and marginal households in a tribal block, has since evolved into one of India's most successful poultry cooperative models. This journey culminated in the formation of MPWPCL in 2006. The delegation visited MPWPCL's fully automated feed manufacturing plant at Itarsi, underscoring the importance of backward integration in ensuring quality, productivity, and resilience.

Mr. Bayas noted that the Kesla–MPWPCL experience powerfully demonstrates how professionally managed, women-led smallholder poultry systems can complement commercial enterprises while delivering lasting social and economic impact.

IPR Espresso

Dr. B. Maheswarappa Naveena Assumes Charge as Animal Husbandry Commissioner

Dr. B. Maheswarappa Naveena has assumed charge as the Animal Husbandry Commissioner (AHC) at the Department of Animal Husbandry and Dairying (DAHD), under the Ministry of Fisheries, Animal Husbandry and Dairying (MoFAHD), Government of India on 23rd January.

Dr. Naveena brings with him a distinguished career spanning animal sciences and livestock products technology. An ICAR National Fellow, he has served with distinction at the ICAR-National Research Centre on Meat (NRCM), Hyderabad, contributing significantly to research, innovation, and capacity building in the livestock sector.

He holds B.V.Sc., M.V.Sc., and Ph.D. degrees and has gained valuable international research exposure at the University of Connecticut, USA, and Oklahoma State University. His professional excellence has been recognised through several prestigious honours, including the ICAR Lal Bahadur Shastri Outstanding Young Scientist Award.

Dr. S.K.M. Myilanandhan Conferred Padma Bhushan

On Republic Day 2026, Dr. S.K.M. Myilanandhan (SKM) was conferred the Padma Bhushan for his outstanding contributions to the Indian poultry industry and society at large.

A visionary leader and pioneer, Dr. Myilanandhan's transformational role in shaping modern poultry farming in India has created sustainable livelihoods, strengthened rural economies, and set enduring benchmarks of excellence across the sector. His leadership has not only driven business growth but has also played a vital role in advancing industry standards, innovation, and farmer empowerment.

Beyond his professional achievements, Dr. Myilanandhan is widely respected for his deep and consistent commitment to social service and community development. His work in education, healthcare, and rural upliftment reflects a values-driven approach that places people and purpose at the heart of progress.

This award is a fitting tribute to Dr. Myilanandhan's lifelong dedication, integrity, and service to the nation.

National Chicken Day 2025

National Chicken Day was celebrated across India on 6th November to commemorate the birth anniversary of Padmashri Dr. B. V. Rao, the visionary who laid the foundation of the country's modern poultry industry. This year's celebrations included the special distribution of 2,000 boiled eggs at two to three locations in Pune through mobile vans.

Selected chicken shops offered products at subsidised rates, with leading companies such as Venky's, Baramati Agro, Japfa, Pro Chicken and Vet Chicken extending 10% discounts. Japfa also announced special online offers.

The campaign spread nationwide. Karnataka saw activities in 60-70 shops, West Bengal hosted recipe contests and discounted fried chicken sales, while Andhra Pradesh displayed nearly 100 banners in key markets. In Maharashtra, radio jingles promoted the day in Pune, Nashik and Sangli. Supported by Poultry India and NECC, the initiative covered 150 shops in Pune, with Miraj and Amravati also reporting enthusiastic consumer participation.

Progressing from Products to Partners—Ecolex Animal Nutrition

Ecolex Animal Nutrition is repositioning itself from a conventional feed additive supplier to a long-term solutions partner for the livestock sector, as outlined during its "Partnering for Progress: South Asia" workshop held in Bangkok on 19th and 20th January.

The workshop brought together Ecolex's distribution partners from across South Asia, along with leading consultants and collaborators, to explore integrated approaches to animal health, farm efficiency, and sustainability—key priorities for a sector navigating productivity pressures, antimicrobial resistance (AMR), and evolving regulatory expectations.

According to Edward Manchester, Global Commercial Director, "Ecolex recognises it cannot address every animal health component of One Health alone. By teaming with specialised leaders in the critical One Health areas of farm management and biosecurity and hygiene, we seek to create integrated, real-world solutions that enhance farm efficiency, reduce antimicrobial resistance (AMR), and promote sustainable practices. We are proud to foster these vital partnerships that advance the livestock sector. Ecolex looks forward to formalising these strategic partnerships in the near future that will offer not just products, but solutions, including training programs and testing services. We aim to deliver comprehensive solutions, creating real long-term value for our distribution partners and their customers across South Asia and beyond."

While the workshop focused largely on strategy and collaboration, Ecolex also presented its differentiated adjacent feed additive technologies. These included:

- AcidMax Pro—proprietary blend of organic acids with Ecolex Artificial Micelle Technology™, ensuring optimal gut health and performance
- PuraTox Pro—bentonite and proprietary humate-based binding technology and mycotoxin degrading enzymes to mitigate mycotoxins
- EnzaMax Pro—next generation multi-enzyme blend with proprietary Ecolex emulsification technology
- FytaMax Pro—advanced, intrinsically thermostable 6-phytase

Emphasising collaboration over standalone product offerings, Ecolex highlighted the importance of cross-sector partnerships in addressing complex animal health challenges.

Mysore Hosts GLOCREST Cup, Bringing Poultry Fraternity Together

GLOCREST Pharmaceutical Pvt. Ltd. hosted the GLOCREST Cup 2026 in Mysore on 24th and 25th January, uniting professionals from across India's poultry sector for two days of spirited competition and meaningful engagement. Designed to foster connections beyond business, the event provided a dynamic platform for stakeholders to interact, strengthen relationships, and encourage long-term collaboration. Teams comprising farmers, integrators, feed manufacturers, veterinarians, and trade partners showcased impressive skill, teamwork, and sportsmanship in closely contested matches. Off the field, participants valued the relaxed networking opportunities that encouraged idea-sharing. The tournament concluded with an awards ceremony honouring outstanding performers and celebrating collective achievement and industry unity.

Industry Experts Gather in Pune for Insightful IPR Knowledge Review Seminar

The IPR Knowledge Review, held in Pune on 17th January, brought the spotlight firmly on one of the most critical dimensions of India's poultry value chain, Chicken & Egg Marketing - The Way Forward. Bringing together a cross-section of industry leaders, , marketers, and practitioners, the Pune edition underscored the urgent need to rethink how poultry products are positioned, priced, and perceived in a rapidly evolving marketplace.

Set against Pune's dynamic ecosystem of agribusiness, research institutions, entrepreneurship, and progressive farming, the seminar provided an ideal platform for informed and forward-looking deliberations.

Speakers and participants acknowledged that while India ranks among the world's largest producers of eggs and chicken, marketing continues to be one of the most complex and critical links in the poultry value chain. Speakers explored how changing consumer preferences, increasing awareness around food safety and nutrition, price volatility, supply chain inefficiencies, and the growing influence of digital platforms are reshaping the poultry marketplace.

Dr. Ajay Deshpande, President, Vets in Poultry was the Chief Guest of the event while Dr. C. B. Pathak, Vice President, Vets in Poultry joined as the Guest of Honour. Dr. Karthiga K, Product Manager, Nanovet Nutrition Pvt. Ltd. was the Special Guest of the seminar.

Distinguished speakers at the seminar included:

Dr. A. D. Nath, Vice President, Animal Feed Business, JapfaComfeed India Pvt. Ltd.	Is Indian Poultry Ready for Global Markets?
Dr. Datta Kulkarni, Assistant General Manager, Technical Services (All India) Venkateshwara BV Biocorp Pvt. Ltd.	Today's Health-Conscious Consumers and the Food Safety Expectations
Dr. Narahari, Founder & CEO, NH ProPOWER Consultancy Services	Redesigning Poultry Value Chains for Efficiency, Traceability and Profitability - Indian Context
Ms. Meghal Singh, Founder & Managing Director, Mommy's Foods Pvt. Ltd.	Digital Disruption in Poultry Marketing - Role of Quick Commerce

The presentations were followed by an interactive panel discussion moderated by Dr. Vijay Makhija, Chairman INFAH Biologicals and Biosecurity. Panelists included Dr. A.D. Nath, Dr. Dutta Kulkarni, Dr. Narahari, Dr. C.B. Pathak, Meghal Singh and Shyam Shreechandrababu.

With the active support of Vets in Poultry and its General Secretary, Dr. Santosh Ire, IPR Knowledge Review's Pune edition concluded on a high note with the key emphasis of the being on the transition from a largely commodity-driven approach to a more market-oriented and consumer-centric poultry business model.

Alltech Strengthens Scientific Support with New Service Laboratory in Chakan

In a significant step toward advancing livestock nutrition and strengthening technical support for farmers, Alltech India inaugurated its state-of-the-art Nutrition Service Laboratory and Bolus Plant at its manufacturing facility in Chakan, Pune, on 15th January. The new infrastructure marks a strategic investment in research-driven solutions designed to enhance productivity, quality assurance, and informed decision-making across India's animal agriculture sector.

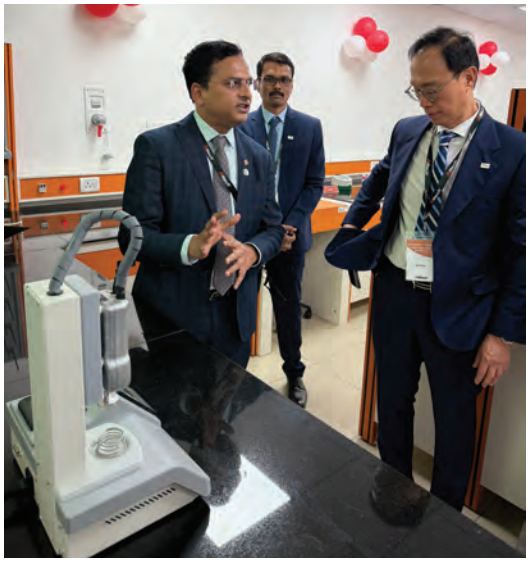
The facility is expected to bolster Alltech's ability to deliver timely, science-based insights while ensuring consistent product quality and reliable nutritional solutions. By expanding its analytical and service capabilities, the company aims to support producers with actionable data that can improve feed efficiency, animal health, and overall farm performance.

Providing an overview of Alltech's operations and the Indian market scenario, Dr. Sayed Aman, Managing Director-India & Regional Director-South Asia, Alltech said that over the past 13–14 years, India's animal feed and protein sectors have shown a strong growth trajectory, with feed production rising steadily and overall demand increasing by over 5% annually. Despite this progress, India remains a protein-deficient nation - only about 60% of daily protein needs are met, with just 22% coming from animal sources. Low per capita consumption of poultry and eggs highlights significant potential for expansion. With nearly

55 million tons of animal feed produced, the industry injects substantial protein into the food chain, yet a wide gap persists compared to global benchmarks. Investments in laboratories, partnerships, innovation, and upcoming regulatory reforms are expected to strengthen capabilities and accelerate sustainable industry growth.

In his talk to the gathered invitees Dr. Mark Lyons, President, Alltech reflected on the company's journey, emphasising the importance of speed, consistent daily action, and a people-centric culture. Established as a family business built on fermentation technology, Alltech has grown globally while maintaining strong local presence and partnerships, particularly in high-growth markets such as India, he reiterated. Ongoing investments in innovation, sustainability, and production capabilities continue to enhance efficiency while reducing environmental impact. Strategic collaborations, acquisitions, and the development of new technologies are positioning the company for sustained growth. Guided by a clear purpose to nourish the population while preserving the planet, the organisation remains optimistic about the future, viewing industry challenges as opportunities and reinforcing its commitment to long-term value creation and meaningful global impact, concluded Dr. Lyons.

Following the formal inauguration of the service laboratory, the invited dignitaries were escorted on a guided tour of the new facility, the existing quality control laboratory, and the shop floor. The occasion also marked the inauguration of the new bolus manufacturing unit by Dr. Mark Lyons and Dr. Syed Aman.



In a candid interaction post the inauguration, **Dr. Mark Lyons** accompanied by **Dr. Syed Aman** and **Dr. Lokesh Gupta**, Technical Director–South Asia (Poultry) shared valuable insights into the future of India's poultry sector, Alltech's innovation-driven approach, and the company's long-term vision for the country.

Reflecting on global protein trends, Dr. Lyons emphasised that poultry is poised to remain the dominant land-based protein worldwide. For India, the opportunity is even greater. With limited alternatives and a rapidly growing population, the country is well positioned for significant expansion in poultry production. However, he cautioned that growth must be matched by preparedness. Disease management, adoption of advanced technologies, and the development of world-class processing capabilities will be critical as the sector scales.

"Beyond production, the real mission is building consumer confidence," Dr. Lyons noted, highlighting that sustainable growth depends as much on trust as on output.

He added that Alltech has significantly transformed its research philosophy in recent years. Moving away from purely academic pursuits, the company has consolidated its research, development, and applications under a dedicated innovation group focused on solving real industry challenges.

"If the research is not addressing a problem, why are we doing it?" Dr. Lyons remarked, underscoring a results-oriented strategy. The shift is already yielding results, with new products introduced within the past two to three years growing three times faster than traditional offerings.

Dr. Aman added that Alltech India aligns closely with this global direction by prioritising projects that directly benefit farmers and producers. The company works extensively with academic institutions providing technical expertise and reformative support to the dairy and

Dr. Lyons said that central to Alltech's global mission is the philosophy of "Working Together for a Planet of Plenty," built on three pillars: ensuring dignified rural livelihoods, delivering the right nutrition and reducing environmental impact.

He explained that better nutrition is one of the most effective pathways to improving human health while lowering healthcare costs. Equally important is communicating the industry's contribution to consumers and policymakers, reinforcing transparency and trust.

India occupies a prominent place in Alltech's global roadmap, said Dr. Lyons, describing the country as a dynamic market with strong manufacturing capabilities, a thriving technology ecosystem, and a strategic geopolitical position.

"What matters most is the people," he said, praising the strength and longevity of the Indian team. Recognising the country's unique potential, Alltech has increased investments and organisational autonomy for its India operations, enabling faster decision-making and localised strategies.

"The next five to ten years for Alltech India will be incredibly exciting," he added.

While infrastructure upgrades are important, Dr. Lyons stressed that the true impact lies in getting technologies into the field.

"The real magic happens when our products reach the animal," he observed.

Dr. Gupta highlighted ongoing efforts to develop solutions tailored to local conditions, focusing on improving feed efficiency, enhancing meat quality, and preparing producers for global market standards.

Sustainability initiatives are increasingly integrated into Alltech India's operations. The team is educating nutritionists on formulating feed based on global warming potential and conducting farm-level assessments to measure carbon footprints.

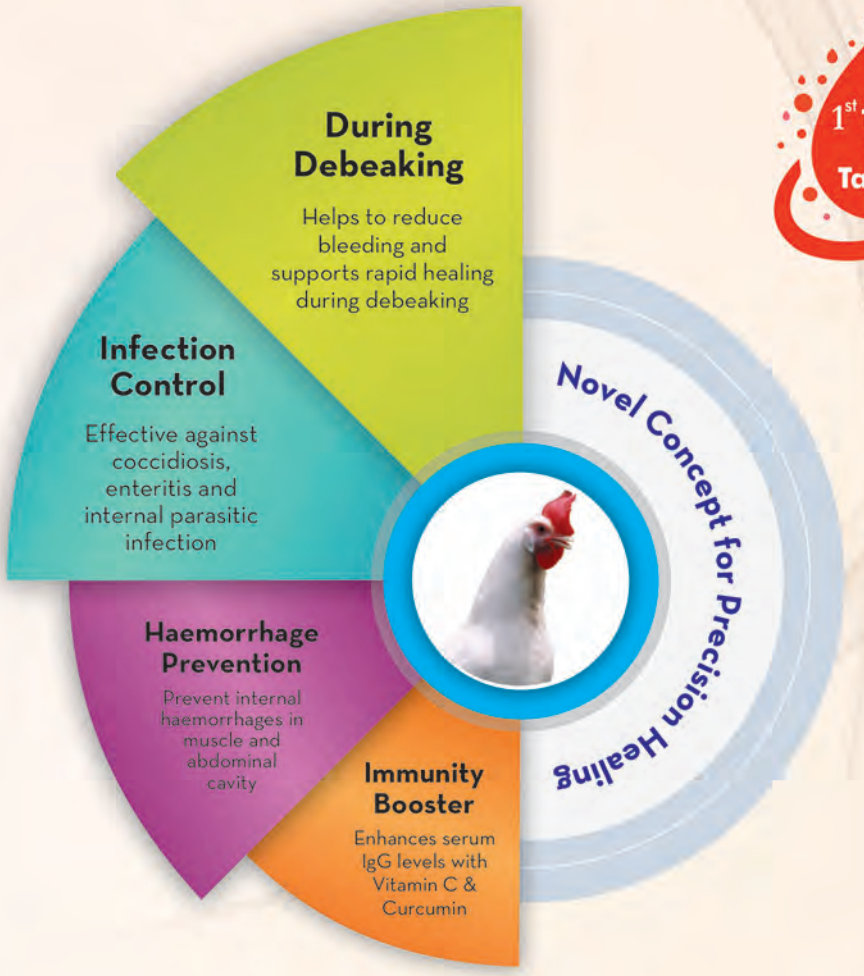
As consolidation accelerates in the broiler segment, the layer industry remains fragmented, requiring extensive on-ground support. Alltech continues to work across the spectrum—from large integrators to smaller producers—offering essential technologies such as trace mineral solutions while demonstrating measurable return on investment. While contract growing may approach 80% in the coming years, Dr. Aman suggested, but inclusive engagement will remain central to long-term sectoral stability.

The interaction underscored a clear message: India is no longer just a high-growth market - it is becoming a strategic hub for innovation, sustainability, and collaborative progress. With a strong local team, customer-centric research, and a commitment to environmental stewardship, Alltech appears poised to play a crucial role in shaping the next chapter of India's poultry and livestock sectors.

CLOTIMIN™ Tablet

Venworld
THE BEST IN ANIMAL HEALTHCARE

Stabilized Vitamin K3 fortified with Vitamin C & Curcumin



"Innovative Haemostatic aid for Beak Trimming and Coccidiosis"

VENKATESHWARA B.V. BIOCORP

Venkateshwara B. V. Biocorp Pvt. Ltd.

'Venkateshwara House', S. No. 114/A/2, Pune – Sinhagad Road, Pune – 411 030.
Tel.: +91-20-24251803 Email : venkateshwarabvbiocorp@venkys.com

India Sets the Stage for the 7th WVPA Asia Meeting 2026

On 9th January the World Veterinary Poultry Association (WVPA), in association with WVPA India, successfully convened the Kick Off Meeting for the 7th WVPA Asia Meeting at New Delhi. Organised jointly with Agrinnovate India Limited and the Department of Animal Husbandry and Dairying (DAHD), Ministry of Animal Husbandry as Knowledge Partners, the meeting marked the formal beginning of preparations for the prestigious international conference scheduled to be held in New Delhi on 9th and 10th October 2026.

Held under the chairmanship of Dr. M. L. Jat, Director General, ICAR, the meeting was graced by Dr. Inderjeet Singh, Hon'ble Vice Chancellor, Bihar Animal Science University, as Guest of Honour, and Dr. Praveen Malik, Animal Husbandry Commissioner, DAHD, as Special Guest.

Bringing together senior leaders from government, academia, research institutions, industry and professional bodies, the Kick Off Meeting focused on defining priorities, forging partnerships and shaping the roadmap for the Asia Meeting. Deliberations centred on critical regional challenges and opportunities, including disease preparedness and biosecurity, antimicrobial resistance (AMR), digital transformation, nutritional efficiency, and the pursuit of sustainable and profitable poultry production across Asia.

Opening remarks and moderation were led by Dr. Ajit S. Ranade, who outlined the objectives of the meeting. Dr. Shirish Nigam, Secretary, WVPA India, highlighted Asia's strategic importance, noting that the region contributes nearly 50% of global egg and chicken production, making regional cooperation essential for future growth. Dr. Jeetendra Varma, President, WVPA India, presented the action plan and preparatory milestones leading up to October 2026, along with the proposed programme framework.

In his keynote address, Suresh Chitturi, Managing Director, Srinivasa Group, outlined India's rapid poultry growth trajectory. He shared that India currently produces around 149 billion eggs annually, with per capita consumption at 106 eggs, and projected production to reach 200 billion in the coming years. He also highlighted India's position as the world's fifth-largest poultry meat producer, with per capita consumption of 7.5 kg and annual growth of 8–10%.

Dr. Praveen Malik, Animal Husbandry Commissioner, DAHD, Government of India, and CEO, Agrinnovate India Limited, called on industry stakeholders to share practical challenges and actionable suggestions for strengthening the poultry sector, while reaffirming the Department of Animal Husbandry's commitment to supporting collaborative initiatives.

A special online address by Prof. Dr. Sjaak, Global President, WVPA, reinforced the association's global role in fostering knowledge exchange among poultry health professionals. Dr. Inderjeet Singh emphasised the need for industry-led research, stronger industry–academia collaboration, and focused support for rural and backyard poultry systems. Senior ICAR leadership, including Dr. Divakar Hemadri (ADG Health) and Dr. A. K. Samanta (ADG Nutrition), pledged technical guidance and support, with the DG, ICAR assuring farmers of adequate maize availability for the sector.

The meeting concluded with a Leadership Panel Discussion on "What Asia Expects from India's Poultry Leadership", featuring leading voices from industry associations, integrators, animal health and feed companies, and academia veterinary students and young professionals.

In closing, the organisers reaffirmed India's readiness to host an inclusive, impactful and globally relevant WVPA Asia Meeting in 2026; one that will advance science, policy and best practices in poultry health and production across the region. A formal vote of thanks was delivered by Dr. B. Barman, bringing the Kick Off Meeting to a close.

Make your bird perform better during Heat Stress

AYU-C FORTE

Scientifically formulated combination

Mode of action:

- Temperature Modulation
- Immunomodulation
- High Osmolyte effect
- Maintain Acid- Base balance
- Improves Gut Health

Benefits:

Improves appetite.

Reduced mortality due to heat stress.

Improves productivity, fertility & hatchability.

Improves eggshell quality and freshness.

Improves meat yield and meat quality.

AYUGEN® PHARMA PVT. LTD.
(An ISO 22000:2018 & GMP Certified Company)

Regd. Office: 202, "Aranya", Aamachi Colony, Behind Venky's Express, Bavdhan Pashan Road, Pune - 411021. Maharashtra.
Customer Care No. 9730076211/9730076216
E-mail : info@ayugenpharma.com

trouw nutrition

a Nutreco company

For producers

Empowering producers to make the most out of their resources.

For the planet

Joining forces to efficiently produce the best quality meat, eggs and milk from the existing resources.

For everyone

Setting for ourselves the ambitious goal of feeding 9 million people by 2050.

Our Innovative Products Range

TOXO®-XL | TOXO® | TOXO®-MX | Fylax® | Fysal®

Selko®-pH | Selacid® GG | Fytera Perform

IntelliMin | IntelliOpt | Optimin® | IntelliBond®

Trouw Premixes | maxcare

Scan the code for latest updates

Trouw Nutrition India Pvt. Ltd
Unit no. L4 04, SLN Terminus, Beside Botanical Garden,
Gachibowli, Hyderabad, Telangana – 500032 T. +91 40 2988 0258
E: customercareindia@trouwnutrition.com W: www.trouwnutrition.in

Global Innovation Takes Centre Stage at IPPE 2026

The International Production & Processing Expo (IPPE) 2026, held from 27th to 29th January at the Georgia World Congress Center in Atlanta, reaffirmed its status as the world's premier annual event for the poultry, meat and animal food sectors. Organised by the U.S. Poultry & Egg Association, American Feed Industry Association and North American Meat Institute, the expo drew participants from over 130 countries and featured more than 1,380 exhibitors across 665,000 square feet of exhibit space.

With over 80 educational sessions, the event addressed key industry priorities including biosecurity, sustainability, artificial intelligence, plant efficiency and market intelligence. Knowledge platforms such as the International Poultry Scientific Forum and Tech Talks delivered research-backed insights and future-ready strategies.

Indian pharmaceutical and equipment companies strengthened their global presence, highlighting innovation and cost-effective solutions. The U.S. Soybean Export Council also showcased advances in animal nutrition. The industry now looks ahead to IPPE 2027, scheduled for 26th to 28th January in Atlanta.


Aviagen®


EXPERTS IN
FEED ADDITIVES


D-MAC
Ideal Tunnel
House Design
Better Growth.


Hy-Line
90
YEARS


DOSTOFARM
THE EXPERTS IN ESSENTIAL OILS
quantumbio
RELEASE THE
HIDDEN VALUE


nuqo

EXPATICA Biopharmaceutica and ABTEC Form R&D Alliance

Strengthening India's push towards science-backed and sustainable poultry nutrition, EXPATICA Biopharmaceutica Pvt. Ltd. and Agro Biotech Research Center Ltd. (ABTEC) recently signed a Memorandum of Understanding (MoU) to collaborate on advanced research and development in animal nutrition and gut health solutions. The collaboration was formally announced at Kottayam, alongside the launch of YLEM Pro, in the august presence of H.E. Dr. C. V. Ananda Bose, Hon'ble Governor of West Bengal.

The MoU brings together EXPATICA's research-driven veterinary pharmaceutical expertise and ABTEC's strong bioscience and R&D capabilities. The partnership aims to build a structured knowledge platform focused on developing innovative probiotics and phytobiotics for the agro-veterinary sector, with a special emphasis on sharing global best practices in animal nutrition and technology.

EXPATICA Biopharmaceutica is known for its eco-safe, biotic-based veterinary formulations while ABTEC has established itself as a leading bioscience organisation committed to natural and organic solutions across animal, plant, and human health.

A major highlight of the event was the unveiling of YLEM Pro, a next-generation gut health solution designed as a 4-in-1 combination of postbiotics, paraprobiotics, probiotics, and prebiotics. Developed through joint R&D efforts, YLEM Pro works synergistically to enhance trained immunity, support gut microbiome balance, and offer a scientifically validated alternative to antibiotics in poultry and livestock production. All probiotic strains used in the formulation are stable and clinically studied.

Commenting on the collaboration, K. M. Jacob, Chairman, ABTEC Ltd., said, "The coupling of EXPATICA'S innovation and ABTEC's R&D base will certainly give an extra boost to our start-ups. This partnership aims to move from intent to implementation, turning this MoU into measurable outcomes and tangible results. I want to express my gratitude to the management and the dedicated teams at both organisations, who have worked tirelessly to bring this agreement to fruition."

Dr. Sachindra Nath Mandal, Executive Director of EXPATICA Biopharmaceutica said, "This partnership marks a pivotal moment in our shared journey to transform biopharmaceutical innovation. Our collaboration will accelerate R&D, drive scientific excellence. Together, we're committed to making a meaningful impact on global health."

"We are excited to partner with EXPATICA Biopharmaceutica to drive innovation in Agri-Livestock and Start-up Entrepreneurship," said Bibin Jacob, Managing Director and CEO of ABTEC Ltd.

Dr. Mithilesh Jaiswal (Additional Director R&D) added, "This collaboration aligns with our commitment to developed and delivering effective and eco-friendly solutions for the sustainable health benefits of Agri-Livestock.

EXPATICA® BIOPHARMACEUTICA

Expert Guide to Biopharmaceutical

Designed to Reach Gut

YLEM® PRO

Modern Solution for Gut Revolution...

International Excellence in Innovation Awards

Excelling To The New Epitome in The Global Front with **YLEM Pro®**

The INTERNATIONAL EXCELLENCE IN INNOVATION AWARD – 2025

by The International Award Forum —USA on 15-Aug-2025

in Ho-Chi-Minh City, Vietnam.

EXPATICA BIOPHARMACEUTICA signed a Memorandum of Understanding (MoU) with the Agro Biotech Research Center Ltd. (ABTEC), presided over by the Honorable H. E. Dr. C. V. Anand Bose, Governor of West Bengal, Chairman of the ABTEC Ltd Mr. K. M. Jacob, Dr. Sachindra Nath Mandal (Executive Director, EXPATICA BIOPHARMACEUTICA)

Hitech's

Creating Values

Poultry of the Highest Quality!

HITECH HATCH FRESH PRIVATE LIMITED

Metropolitan Co-Operative Housing Society Ltd., Sector - B, Plot No. - 28, Canal South Road, Kolkata - 700 105
Ph. : 91-33-40638301 | Fax : 91-33-40638315 | E-mail : hitechhatchfresh@rediffmail.com | Website : www.hitechhatchfresh.com

Integration Office :

BHALUKA • NATAGARH • KATWA – 9734148253 | BASIRHAT – 03217 263744 | BADURIA – 033217 238444
BURDWAN • BHATAR • SURI • SALAR • PLASSEY • BANKURA – 8582891213 | BHADRESHWAR (HOOGHLY) • MALDA • BARUIPUR – 2633 6973, 9903614062

Gallinase™

Innovation Elevates Food Safety

THE KEY TO SAFETY IS IN OUR HANDS - MAKE SAFETY A REALITY AND DON'T BE A FATALITY.

- Early Stage & Gut Health
- Growth & Development
- Health & Safety

PRIORITY **PREMIUM** **PROVEN**

ABTL

info@abtl.in +91 20 2729 1020 / 21 www.abtlenzymes.com

SEN

Touching Lives

Celebrating 75 Years of Excellence in Poultry Industry

Sen Group, one of Eastern India's oldest and most trusted poultry house, has been a cornerstone of the industry for 75 years. As a pioneering value-driven organization, the Group encompasses poultry farming and Integrator farming, feed manufacturing, and breeder farming with day-old chicks production. Committed to excellence and social empowerment, Sen Group supports local farmers, provides employment, and ensures trust and quality through superior products and ethical practices. By fostering rural development through sustainable farming and community initiatives, Sen Group has been your trusted partner since 1950.

75 SEN SINCE 1950

West Bengal | Bihar | Uttar Pradesh | Jharkhand

Chhattisgarh | North East | Madhya Pradesh

SEN FEEDS | SEN BROTHERS PVT LTD | URBAN HI BREED FARM LTD

HI BREED AVIAN RESEARCH & INTERGRATORS | HI BREED INTERNATIONAL SALES & SERVICE

22 R.N. Mukherjee Road, Kolkata - 700001

www.senindia.co.in mail@senindia.co.in (033)40070525