Livestock & Feed Trends



VOLUME - 23 • NUMBER - 2 • JULY - SEPTEMBER 2025

58th Annual General Meeting (AGM) & 66th National Symposium 2025











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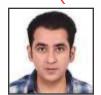
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From the Chairman's Desk......

Dear Friends.

Warm greetings to you all!

It gives me immense pleasure to share the remarkable success of the 58th Annual General Meeting (AGM) and the 66th National Symposium of CLFMA of India, held on 22nd and 23rd August 2025 at Hotel Taj Deccan, Banjara Hills, Hyderabad.

Thanks to the spontaneous and wholehearted participation of our CLFMA members, the event was a resounding success—reflecting the strength and unity of our fraternity.

A Historic First: The CLFMA Students Program, for the first time in CLFMA's history, we proudly introduced a Students Program, creating a unique platform to inspire, empower, and connect the next generation of researchers and professionals with the real-world challenges and opportunities in animal agriculture. To honour their creativity and dedication, CLFMA conferred Gold, Silver, and Bronze Awards, along with cash prizes, to the selected students-marking a significant step in nurturing future leaders of our industry.

We extend our sincere thanks to the Department of Animal Husbandry and Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying, Government of India, for their gracious logo support for the 66th National Symposium 2025.

The Symposium was honoured by the presence of several eminent dignitaries, including, Prof. S. P. Singh Baghel, Hon'ble Minister of State for Fisheries, Animal Husbandry & Dairying, and Ministry of Panchayati Raj, Government of India, Sri. Vakiti Srihari, Hon'ble Minister for Animal Husbandry, Dairy Development & Fisheries, Sports and Youth Services, Government of Telangana, Sri Sabyasachi Ghosh, IAS, Special Chief Secretary, Government of Telangana, Dr. Muthukumaraswamy B., Joint Secretary (NLM), Department of Animal Husbandry & Dairying, Government of India, Shri. Tarun Sridhar, IAS (Retd.), Former Secretary, AHD, Shri. Eatela Rajendra, Member of Parliament, Government of Telangana, Shri. Mettu Saikumar, Chairman, Fisheries Federation, Telangana. Their presence and insights added immense value to the deliberations and reinforced our shared commitment to the sector.

A Comprehensive Report on the 66th National Symposium 2025, titled **66th National Symposium**



Report, 2025, will be compiled and shared with all stakeholders, including relevant government officials. A detailed overview of CLFMA's recent initiatives has also been included under the section **CLFMA Activity Updates** for your kind reference.

These milestones reaffirm our collective resolve to engage, innovate, and advocate for the advancement of the livestock industry. Your continued support, active participation, and thoughtful feedback are the driving forces behind our progress.

As we move forward, I warmly invite your valuable suggestions to help us grow stronger and more resilient-as a united voice of the livestock sector.

Let us continue to build a sustainable and thriving future for our industry and for our nation.

With warm regards,

For CLFMA OF INDIA,

Mr. Divya Kumar Gulati Chairman

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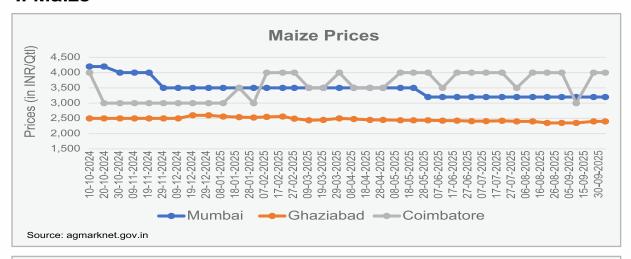
COMMODITY UPDATES



Commodity Updates

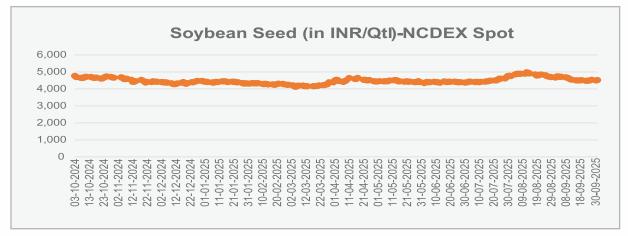
1. Domestic Prices

I. Maize



| Maize Prices (INR/Quintal) | | |
|----------------------------|------------|------------|
| City | 30/09/2025 | 31/08/2025 |
| Mumbai | 3,200 | 3,200 |
| Ghaziabad | 2,400 | 2,350 |
| Coimbatore | 4,000 | 4,000 |

II. Soybean

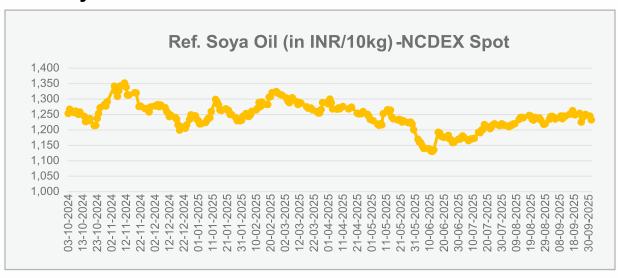


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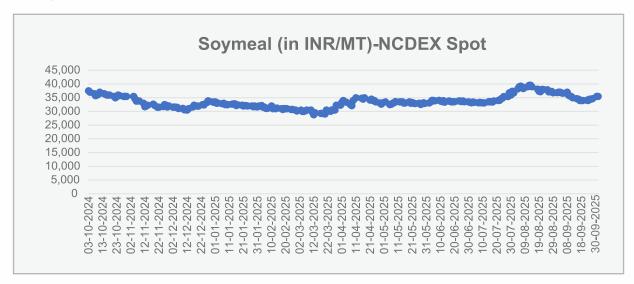
COMMODITY UPDATES

| Soybean Complex Prices NCDEX Spot | | |
|-----------------------------------|------------|------------|
| Commodity (Unit) | 30/09/2025 | 31/08/2025 |
| Soybean Seed (in INR/Qtl) | 4,520 | 4,693 |
| ef. Soya Oil (in INR/10kg) | 1,233 | 1,220 |
| Soymeal (in INR/MT) | 35,500 | 36,800 |

Ref Soya Oil

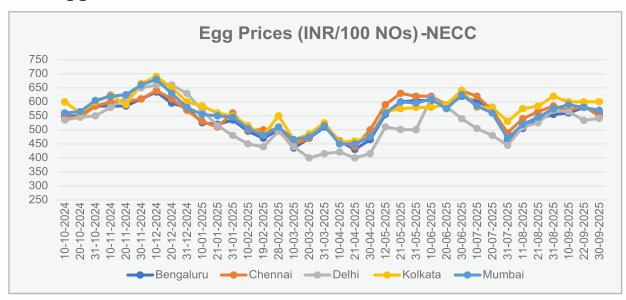


Soymeal



COMMODITY UPDATES ___

III. Egg Rates

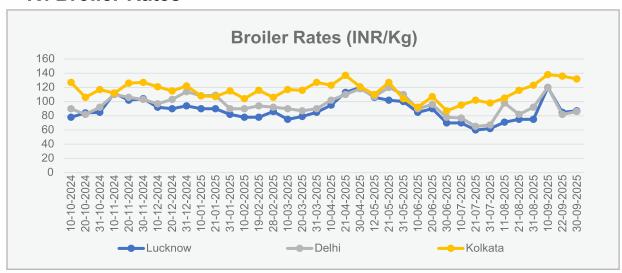


| Name of Zone | 30/09/2025 | 31/08/2025 |
|----------------|------------|------------|
| ECC Prices | | |
| hmedabad | 560 | 565 |
| Ajmer | 512 | 530 |
| Barwala | 521 | 553 |
| Bengaluru (CC) | 560 | 555 |
| Brahmapur (OD) | 545 | 575 |
| Chennai (CC) | 550 | 585 |
| Chittoor | 543 | 578 |
| Delhi (CC) | 541 | 570 |
| E.Godavari | 530 | 555 |
| Hospet | 500 | 495 |
| lyderabad | 500 | 520 |
| labalpur | 525 | 535 |
| Kolkata (WB) | 600 | 620 |
| udhiana | 523 | 540 |
| Mumbai (CC) | 570 | 575 |
| Луsuru | 570 | 563 |
| Namakkal | 505 | 515 |
| Pune | 560 | 565 |
| Raipur | 535 | 550 |
| Surat | 565 | 565 |
| /ijayawada | 530 | 560 |
| /izag | 520 | 560 |
| V.Godavari | 530 | 555 |
| Varangal | 502 | 522 |

III. Egg Rates

| Name of Zone | 30/09/2025 | 31/08/2025 |
|-------------------|------------|------------|
| Prevailing Prices | | |
| Allahabad (CC) | 557 | 581 |
| 3hopal Shopal | 525 | 540 |
| ndore (CC) | 540 | 540 |
| Kanpur (CC) | 548 | 567 |
| _ucknow (CC) | 583 | 595 |
| Muzaffurpur (CC) | 580 | 615 |
| Nagpur | 540 | 540 |
| Patna | 580 | 615 |
| Ranchi (CC) | 585 | 590 |
| /aranasi (CC) | 567 | 583 |

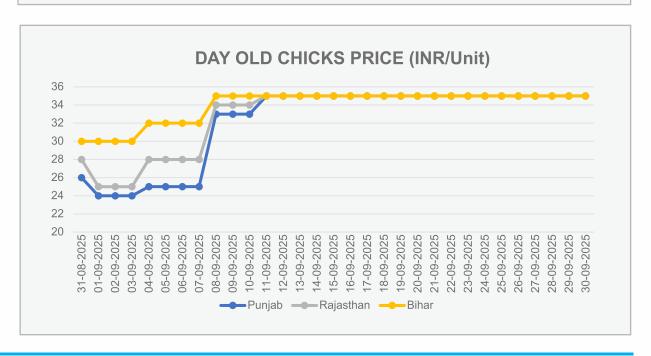
IV. Broiler Rates



| ocation | 30/09/2025 | 31/08/2025 |
|---------------|------------|------------|
| elhi | 86 | 92 |
| ınjab | 82 | 80 |
| aipur | 90 | 85 |
| une | 78 | 92 |
| engaluru | 95 | 89 |
| derabad | 105 | 95 |
| uwahati | 82 | 92 |
| olkata | 132 | 123 |
| har | 84 | 85 |
| adhya Pradesh | 105 | 108 |
| ucknow | 87 | 75 |

V. Day old Chicks Price

| State | 30/09/2025 | 31/08/2025 |
|------------------|------------|------------|
| Punjab | 35 | 26 |
| Dehradun | 35 | 29 |
| laryana | 35 | 27 |
| Himachal Pradesh | 35 | 27 |
| Rajasthan | 35 | 28 |
| ammu | 35 | 28 |
| ndhra Pradesh | 38 | 27 |
| ttar Pradesh | 35 | 30 |
| adhya Pradesh | 38 | 30 |
| elangana | 38 | 27 |
| Bihar | 35 | 30 |
| narkhand | 35 | 30 |
| Gujarat | 36 | 24 |



VI. Fish Prices

| ish Type | 30/09/2025 | 31/08/2025 |
|-----------------|------------|------------|
| Bata Putti | 8,000 | 7,500 |
| Black Dom | 13,000 | 13,500 |
| Blue Dom | 13,500 | 14,000 |
| Chilwa | 10,500 | 11,000 |
| łalwa | 24,000 | 25,000 |
| lilsa | 43,500 | 42,000 |
| Katla (Small) | 11,000 | 10,000 |
| Лаlli (Big) | 20,000 | 20,000 |
| Malli (Small) | 13,000 | 11,000 |
| Pangass | 8,000 | 8,500 |
| Katla (Big) | 16,000 | 16,000 |
| Singhra (Big) | 24,500 | 34,500 |
| Singhra (Small) | 15,500 | 26,000 |
| surmali (Small) | 25,000 | 25,000 |
| urmai (Big) | 35,000 | 40,000 |
| Sol | 40,000 | 40,000 |
| Soli | 20,000 | 20,000 |
| Vhite Dom | 13,000 | 14,500 |
| Rahu (Andhra) | 10,500 | 11,500 |
| inga (Zambo-A) | 49,500 | 48,500 |
| inga (Zambo-B) | 39,500 | 37,500 |
| Zinga (Zambo-C) | 25,000 | 25,000 |

Source: agmarknet.gov.in

The Prices are of Delhi (Gazipur Mandi)

2. Global Commodity Prices

| Commodity (Unit) | PRICE (30/09/2025) |
|------------------------|--------------------|
| Milk (USD/CWT) | 17.56 |
| Rapeseed (Euro/Ton) | 468.02 |
| Soybean Meal (USD/Ton) | 264.80 |
| Soybean Oil (USD/lb) | 0.49 |
| Live Cattle (USD/Lbs) | 2.31 |
| Poultry (USD/Kgs)* | 1.55 |
| Eggs US (USD/Dozen) | 1.23 |

Source:tradingeconomics; markets.businessinsider

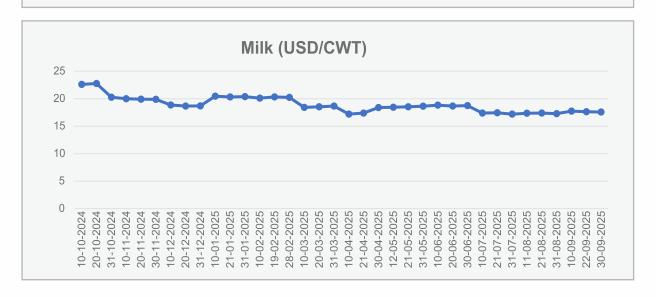
USD: United States Dollar

CWT: Short Hundredweight

Lbs: Pounds

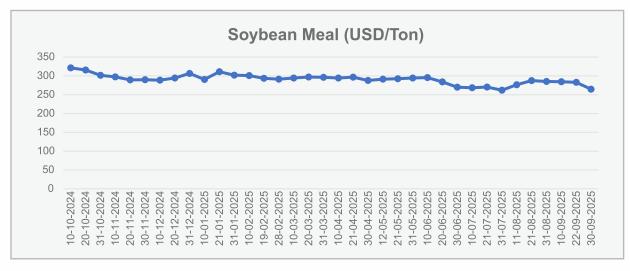
1 BRL (Brazilian Real) €.18 USD

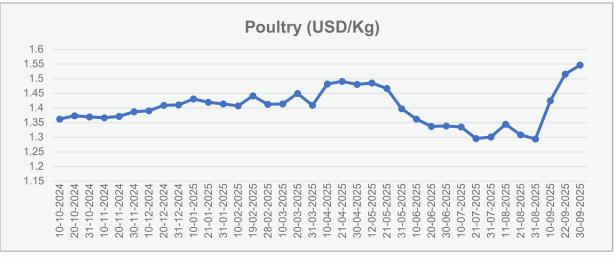
^{*-}Poultry price refers to the cost of the chicken in the wholesale market of São Paulo, Brazil. The price is converted or blacking above conversion rate.



COMMODITY UPDATES

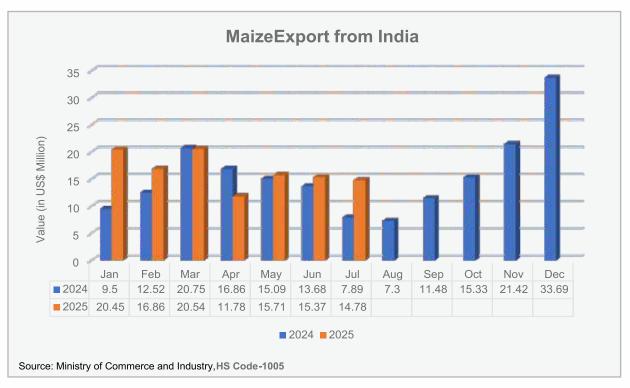
2. Global Commodity Prices



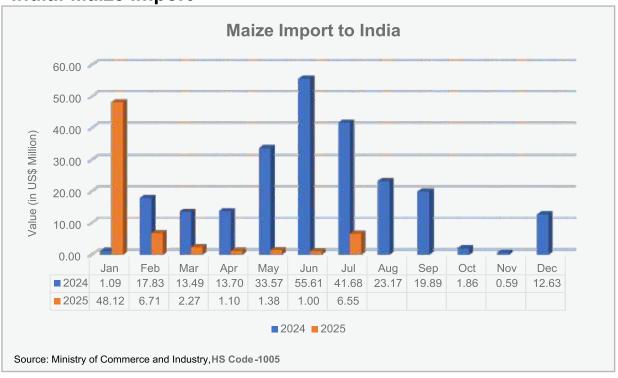


3. Trade Details

India: Maize Export



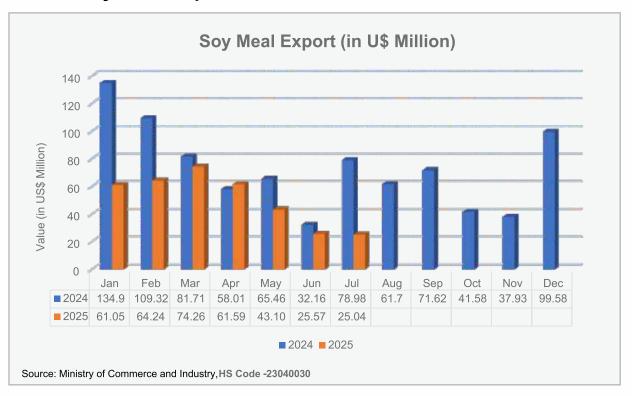
India: Maize Import



Note: This Data is sourced from the Ministry of Commerce and Industry, which was last updated in July.

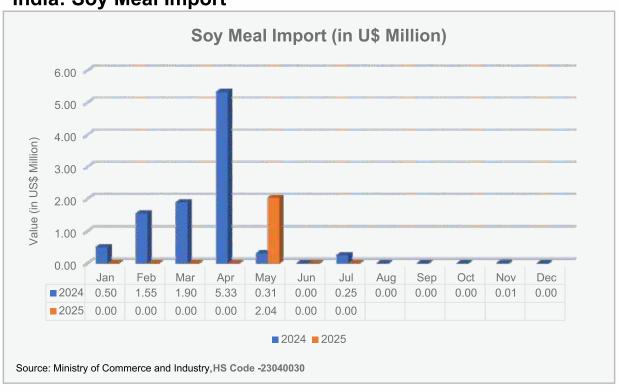
COMMODITY UPDATES ____

India: Soy Meal Export



India: Soy Meal Import

LIVESTOCK & FEED TRENDS



Note: This Data is sourced from the Ministry of Commerce and Industry, which was last updated in July.

5. Market Drivers

| Maize | | |
|---|-----------------|--|
| Market Drivers | Monthly Outlook | |
| Growing Demand for Poultry and Livestock Feed | Bullish | |
| Rising demand for Ethanol in Auto-fuels | Bullish | |
| Increasing Demand as a Wheat Substitute due to Wheat Export Ban | Bullish | |
| Increasing Food Inflation | Bearish | |
| Commercialization of Genetic Modified Maize Crop | Bullish | |
| Increasing demand for Coarse Cereals | Bullish | |

| Poultry | | |
|-----------------|--|--|
| Monthly Outlook | | |
| Bullish | | |
| Bullish | | |
| Bearish | | |
| Bearish | | |
| Bullish | | |
| Bullish | | |
| | | |

Regards, CLFMA OF INDIA 111, Mittal Chamber, 11th Floor, Nariman Point, Mumbai-400 021, INDIA Telephone: +91-22-22026103

Sourced by: IMARC Group

PRESS RELEASE _____



CLFMA OF INDIA and Sri Lanka Livestock Meet Marks a New **Chapter in Bilateral** Cooperation

- The CLFMA of India and leading Sri Lankan institutions initiated formal dialogue to advance livestock health, feed innovation, and policy collaboration.
- Two days of interactive sessions and networking forged a roadmap for joint R&D, capacity-building and sustainable trade cooperation.

July 07 2025: In a significant step towards strengthening regional cooperation in the livestock and poultry sectors, the CLFMA of India, in association with the Sri Lanka Veterinary Association (SLVA) and the World Poultry Science Association - Sri Lanka Branch (WPSA-SL), hosted the India-Sri Lanka Livestock Meet on 1st and 2nd Iulv 2025. The two-day event marked the formal beginning of an institutional dialogue between the two nations and set the stage for collaborative action in areas such as animal health, feed innovation, policy alignment, and knowledge exchange.

Reflecting the strategic importance of the engagement, the event was attended by several high-level dignitaries and institutional heads from Sri Lanka. Among the prominent attendees were Dr Palika Fernando, Additional Secretary (Livestock Development), Ministry of Agriculture, Livestock, Land and Irrigation, and Dr. Sulakshana Jayawardana, Director General - Treasury, Ministry of Financial Planning and Economic Development. The Sri Lankan delegation also included key figures from SLVA and WPSA-SL.

Representing India, the CLFMA delegation was led by Chairman Mr. Divya Kumar Gulati and included Deputy Chairman Mr. Naveen Pasuparthy, Honorary Secretary Mr Nissar F. Mohammed, Treasurer Mr. R. Ramkutty, President - East Zone Mr. Sameer Chotai, International Liaison Committee Member Mr. Jaison John, and Executive Director Colonel Vinay Kumar.

The engagement began on 1st July 2025 with an informal coordination meeting between the office bearers of SLVA, WPSA-SL, and CLFMA's Sri Lanka coordination team. The relaxed setting allowed for open, solution-driven dialogue and laid the groundwork for future alignment. This was followed by a networking dinner where Mr. Divva Kumar Gulati formally invited the Sri Lankan delegation to participate in CLFMA's upcoming 66th National Symposium and 58th Annual General Meeting in Hyderabad, scheduled for 22-23 August 2025 at Hotel Taj Deccan, Hyderabad — an invitation that was warmly received.

Building on the momentum from Day 1, the formal sessions on 2nd Iuly commenced with a welcome address by Mr. Gulati, who outlined CLFMA's mission, recent initiatives, and its longterm vision for regional cooperation. A detailed presentation by Colonel Vinav Kumar further showcased CLFMA's impact across India's livestock value chain. The dialogue that followed focused on aligning efforts in areas like livestock breeding, veterinary research, nutritional advancements, and capacity-building. It was evident that both sides saw the value of transforming this bilateral dialogue into a structured and ongoing partnership.

"This meet is not just a bilateral engagement—it's a platform for creating long-term value for the

livestock and poultry sectors of both countries," said Mr. Divya Kumar Gulati, Chairman, CLFMA of India. "We see immense potential for joint R&D, policy advocacy, and trade cooperation, and we are committed to deepening this collaboration."

Adding to this momentum, Dr. Palika Fernando affirmed the government's interest in strengthening technical and research collaboration with Indian counterparts. "There is tremendous scope for India-Sri Lanka cooperation in livestock breeding, feed innovation, and veterinary sciences. We appreciate CLFMA's proactive approach and look forward to institutionalising this partnership."

Echoing this sentiment, Dr. Sulakshana Jayawardana reaffirmed the Sri Lankan government's commitment to structured, cross-border cooperation. Dr. Ushan Pallegama, President, SLVA, and Dr. Mallawa Arachchi, President, WPSA-SL, also expressed enthusiasm for establishing long-term collaboration with CLFMA through formal institutional frameworks and joint initiatives.

Following these productive discussions, the event concluded with a felicitation of dignitaries and a vote of thanks by Mr. Nissar F. Mohammed, followed by a formal dinner. The atmosphere was marked by mutual respect, shared purpose, and a clear willingness to build a long-term partnership.

The CLFMA delegation included:

- Mr. Divya Kumar Gulati, Chairman
- Mr. Naveen Pasuparthy, Deputy Chairman
- Mr. Nissar F. Mohammed, Honorary Secretary
- Mr. R. Ramkutty, Treasurer
- Mr. Sameer Chotai, President -East Zone
- Mr. Jaison John, International Liaison Committee Member
- Colonel Vinay Kumar, Executive Director

By fostering open dialogue and shared

PRESS RELEASE _____

goals, the India-Sri Lanka Livestock Meet reaffirmed the power of partnerships in building a robust, sustainable, and inclusive livestock

About CLFMA:

ecosystem for the region.

Founded in June 1967 as The Compound Feed Manufacturers Association, CLFMA of India is the apex

body for the country's livestock sector. It represents over 250 members across various sub-sectors, including feed manufacturing, poultry, dairy, aquaculture, animal nutrition, and veterinary services. CLFMA is recognised by Central and State Governments, livestock farmers, government agencies, agricultural

universities, veterinary colleges, and national research institutes. As the voice of the Indian livestock industry, CLFMA advocates for sustainable growth, industry standards, and policy development, contributing significantly to the advancement of the animal protein value chain in India and internationally.

















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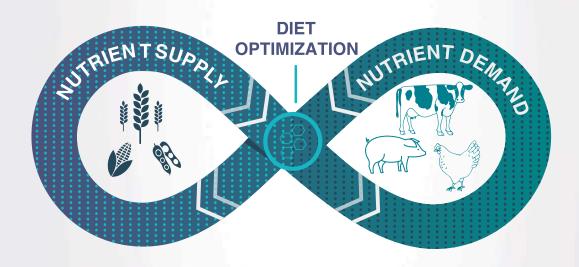






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26



CLFMA OF INDIA Delegation Strengthens U.S. -India Agricultural & Livestock Collaboration Through In-Depth Knowledge Exchangee

- The CLFMA of India delegation visited the United States to study sorghum, corn, and dairy farming practices and engage with top agricultural stakeholders.
- · Meetings included live farm demonstrations, industry interactions, and discussions with senior U.S. officials, including the Governor and Agriculture Secretary of Iowa.
- The visit reinforces ongoing MoUs between CLFMA, the State of Iowa, and Maharashtra, promoting knowledge exchange and bilateral cooperation.

The Compound Livestock Feed Manufacturers Association (CLFMA) of India successfully concluded a week-long delegation visit to the United States, marking a significant step in advancing international cooperation in agriculture and livestock feed. Invited by the U.S. Grains Council, the delegation, led by Chairman Mr. Divya Kumar Gulati, engaged with policymakers, industry leaders, and farmers to explore best practices in sorghum (jowar), corn, and dairy production.

The visit commenced in San Antonio, Texas, where the delegation

participated in a series of technical sessions led by experts from the United Sorghum Checkoff Program. Kansas State University, Clemson University, and the U.S. Grains Council. Discussions spanned global sorghum markets, grain standards, sustainable farming practices, and the role of sorghum in poultry, swine, and pet food diets. Sessions also highlighted efficiencies within the U.S. grain supply chain and emerging trends in global demand.

Next, the delegation travelled to Amarillo, Texas, to witness sorghum cultivation and processing firsthand. Visits included Will Braack and Kathy Broman Farms, Joe Rohrbach Farms, and the Richardson Seed Company in Vega. The program also featured a tour of Myles Frische Farms and an engagement with Bunge in Etter, Texas, offering an in-depth look at planting, harvesting, and supply chain operations. The Texas leg concluded with a debrief session hosted by the United Sorghum Checkoff Program in Amarillo.

In Iowa, the delegation explored the integrated grain-to-feed ecosystem through visits to **POET Bioprocessing** facilities in Jewell and Shell Rock, as well as Mark Mueller's farm in Waverly, where the team was hosted for a farmer-organized cookout. Additional stops included **Stuart** Swanson Farms in Galt, the Gold Eagle Feed Mill in Eagle Grove, and Dutchland Dairy in Rolfe, providing insights into ethanol production, feed manufacturing, and large-scale dairy operations.

The Iowa program culminated in strategic engagements, featuring a high-level meeting with the Governor of Iowa at the State Capitol, followed by discussions with the Iowa **Agriculture Secretary and members** of the Iowa Corn Growers Association. These interactions focused on agricultural policy, trade, and technology adoption, underscoring opportunities for longterm collaboration in livestock feed and dairy sectors.

This visit reinforces ongoing efforts

under the MoU signed between CLFMA and the State of Iowa (September 2024), and the sisterstate agreement between Maharashtra and Iowa (August **2025).** Both frameworks aim to facilitate joint research, knowledge sharing, and adoption of sustainable practices in the livestock feed and broader agricultural sector.

Commenting on the visit, Mr Divya Kumar Gulati, Chairman, CLFMA of India, said, "This visit provided invaluable insights into advanced agricultural practices, particularly in sorghum, corn, and dairy production. With India's animal feed market valued at approximately USD 14.34 billion in 2024 and projected to reach USD 21.02 billion by 2034, the need for sustainable and efficient feed solutions is paramount. Engaging with U.S. counterparts has highlighted the importance of knowledge exchange in addressing challenges such as feed shortages and productivity gaps. By adopting proven practices and fostering international collaboration, we aim to enhance the sustainability and competitiveness of India's livestock sector."

The CLFMA delegation included:

- Mr. Divya Kumar Gulati, Chairman
- Mr. Abhay Shah, Deputy Chairman
- Mr. Abhay Parnekar, Deputy Chairman
- Mr. Nissar F. Mohammed, **Honorary Secretary**
- Mr. R. Ramkutty, Treasurer
- Mr. Sameer Chotai, President -East Zone
- Mr. Sumeet Surekha, Deputy Chairman
- Mr. Suresh Deora, Immediate Past Chairman
- Mr. Naveen Pasuparthy, Deputy Chairman

Through direct engagement with U.S. farmers, industry representatives, and policymakers, the CLFMA delegation reinforced India's commitment to sustainable agricultural practices, livestock feed innovation, and international collaboration.

PRESS RELEASE ___





















PRESS RELEASE _____





















PRESS RELEASE _____









India's Marine Fish Landings **Drop 2% to 3.47** Million Tonnes in 2024

India's marine fish landings have marginally dropped by 2% to 3.47 million tonnes in 2024 compared to the previous year, with Gujarat retaining its foremost position as the country's leading producer of marine fisheries at 0.75 million tonnes, data released by the ICAR-Central Marine Fisheries Research Institute (CMFRI) showed. Tamil Nadu was the second-largest state in terms of marine fisheries production at 0.67 million tonnes, and Kerala ranked third at 0.61 million tonnes. In marine fisheries, catch and landings are distinct terminologies. 'Catch' refers to all marine organisms removed from the water during fishing operations, including fish that are discarded or not sold, while landings refer to the portion of the catch that is actually brought ashore and received by the harvester, regardless of whether it's subsequently discarded or sold. CMFRI's annual marine fish landing estimates showed that Indian mackerel remained the most landed resource in the country at 0.26 million tonnes, followed by oil sardine at 0.24 million tonnes. The Fishery Resources Assessment, Economics and Extension Division of the CMFRI estimated the annual marine fish landings of the country through its online data collection system. Across India, species such as Indian mackerel, threadfin breams, oil sardine, ribbonfishes, nonpenaeid shrimps, and cephalopods recorded a decline in 2024 compared to the previous year, while landings of lesser sardines, penaeid shrimps, anchovies, and tunnies increased. While the west coast region suffered an overall decrease in landings, the east coast showed an increasing trend, with exceptions in Maharashtra and Andhra Pradesh. Maharashtra registered the highest growth of 47% in marine fisheries landings compared to the previous year. West Bengal, Tamil Nadu, and Odisha also saw notable increases of 35%, 20%, and 18%, respectively, an official statement by CMFRI showed. However, states like Karnataka, Goa, and Daman & Diu experienced significant declines in landings. The statement further said that, in total, around 2.5 lakh fishing trips were monitored to arrive at the data.

Gujarat's Fish Production **Expected To Rise** 14% To Reach 10.4 Lakh Mt

Asserting that Gujarat is the secondlargest fish-producing state in the country, the state govt on 03 August 2025 said that the state's fish production is expected to touch 10.37 lakh metric tonnes. The govt said that over the past four years, the state recorded an average annual fish production of 8.56 lakh metric tonnes. Providing data, the govt said that between Oct 2023 and Sep 2024, the state's marine fish production stood at

7,04,828 metric tonnes, while inland fish production was 2,03,073 metric tonnes, bringing the total to around 9,07,901 metric tonnes. "For the Oct 2024 to Sep 2025 period, the marine fish production is projected at 7,64,343 metric tonnes and inland production at 2,72,430 metric tonnes. The state's total fish production for the year (Oct 2024 to Sep 2025) is expected to reach approximately10,36,773 metric tonnes, an increase of 14.19%," the statement said. The State govt said on 03 August 2025 that the Union govt released a grant of Rs 50 crore in 2025-26 to Guiarat under the Pradhan Mantri Matsya Sampada Yojana (PMMSY). The scheme aims to strengthen the infrastructure essential for the fisheries sector while addressing key gaps in the fisheries value chain, such as production, productivity, quality, modern technology, post-harvest infrastructure and marketing. From 2020-21 to 2024-25, the Union govt approved projects worth Rs 897.54 crore for Gujarat under PMMSY, the statement said. The govt said that several initiatives have been announced to promote the fisheries sector, including a reduction of VAT on diesel, subsidies on kerosene and petrol, improved port facilities and land allocation for shrimp farming. The statement said that four new fishing ports are being developed at Madhvad, Nava Bandar, Veraval-2 and Sutrapada. Additional assistance will also be extended for the replacement of boats and nets for traditional fishermen, the establishment of fish by-product processing units, seaweed seed banks, shrimp, fish and crab hatcheries, and seaweed culture using raft or tube net systems, the statement said.



Sustainable Tuna Industry, **Aquaculture**

India and the Maldives have signed a fisheries cooperation agreement that will help the island nation scale up its fish processing capabilities and strengthen sustainable tuna fishing, while providing India with enhanced access to deep-sea fisheries resources in the strategically important Indian Ocean region. The memorandum of understanding was signed on July 25, 2025 during Prime Minister Narendra Modi's state visit to the Maldives, as part of six bilateral agreements exchanged between the two countries. The deal between India's Department of Fisheries and the Maldives' Ministry of Fisheries and Ocean Resources aims to promote sustainable tuna and deepsea fisheries, strengthen aquaculture and resource management, and foster fisheries-based eco-tourism, an official statement said. Key areas of cooperation include value chain development, mariculture advancement, trade facilitation, and capacity building within the fisheries sector, according to the agreement. Under the partnership, the Maldives will scale up fish processing capabilities by investing in cold storage infrastructure and strengthening aquaculture through hatchery development, improved production efficiency, and diversification of cultured species.

India, Maldives Tamil Nadu: Sign Fisheries Namakkal Egg Deal To Boost Exports Record Impressive Growth

The poultry hub of Namakkal has made remarkable progress in egg exports by surpassing its own records every passing year. Registering a significant growth, the 'egg city' of India exported 11.36 crore eggs till June this year. It was 6.55 crore eggs in the whole of last year. In a positive transformation, the poultry hub is gradually becoming a global player in egg exports, a resounding success. "For long, the poultry farmers from this region were exploring the possibility of reaching out to global consumers. Notably, the recent export of one crore eggs to the US proved a turning point.

Another consignment of 20 lakh eggs sent from Namakkal is likely to reach the US in two more weeks. Egg exports have doubled by 50 per cent this year," said 'Vangili' Subramaniam, president of Tamil Nadu Egg Poultry Farmers Marketing Society. Until the COVID-19 pandemic; the egg exports went through marginal ups and downs, before starting to witness a phenomenal rise in the year 2022. According to data from the National Egg Coordination Committee (NECC) egg exports were at 2.99 crore in 2015, 2.48 crore in 2016, 2.32 crore in 2017 and 2.18 crore in 2018. It was during the pandemic; the poultry sector plunged into crisis as exports crashed to 1.44 crore in 2019 and further down to 79 lakhs in 2020 before scaling up to 1.43 crore in 2021.

From the following year, the growth phase kicked off with 3.03 crore in 2022, 5.68 crore in 2023 and 6.55 crore in 2024. The monthly egg exports for

this year also indicated a steady rise from 6.56 lakh in January, 7.22 lakh in February, 9.77 lakh in March, 14.45 lakh in April, 15.87 lakh in May and 14.31 lakh in June. Even though the current scenario of exports looks goods, the poultry farmers believe they could reach great heights with the support of the government by marketing their produce. Following an increase in exports, production is likely to go up further with more poultry farms coming up in Namakkal. "By next year, production may increase by another 50 lakh eggs.

From five crore eggs produced daily during the pandemic, production increased to up to 7.5 crore eggs now and is poised for further growth in the coming months. Over the years, the number of poultry farms increased by 30 per cent with the entry of several small-scale farmers into the sector," said Vangili. However, C Panneerselvam, president of the Egg Exporters Association, sounded caution over an exponential increase in egg production by saying, "The volume of egg exports has come down by 30 per cent this month as compared to June. Egg exports are a seasonal business. Even in the US, considered to be a market with high growth potential, exports failed to pick up as expected due to low demand.

Telangana Poultry **Federation Opens** Cull Bird Single **Window Facility at Pedda Amberpet**

The Telangana Poultry Federation (TPF)inaugurated the Cull Bird Single Window - 5 Regions building at Pedda Amberpet, near the ORR. The new facility marks a milestone in

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strengthening infrastructure and operational efficiency for the poultry sector in Telangana and neighboring states. TPF President Kasarla Mohan Reddy said this building is more than infrastructure, it symbolizes unity, progress, and our Federation's commitment to empowering poultry farmers.

IPEMA/Poultry India President Uday Singh Bayas said, "This initiative aligns with our mission for sustainable growth and marks a new chapter in poultry infrastructure development." Those present at the event included Marthineni Dharma Rao, former MLA, Daley Sudhakar, Ex-President, APFF, Gurram Chandrashekhar Reddy, Chairman, NECC Hyderabad Zone, and others. The building, now operational, is expected to serve as a model facility for farmer coordination, product flow, and market connectivity across Telangana's five poultry regions.

Bihar Cabinet Approves Five New Dairy Plants Worth ₹316 Crore toBoost Milk Production

The Bihar cabinet has approved the establishment of five new dairy plants, including two milk powder processing units, at an estimated cost of ₹316 crore. The move aims to harness the state's dairy potential, enhance milk supply, and create employment opportunities at the local level. According to the Cabinet Secretariat Department's Additional Chief Secretary S. Siddharth, the proposal was cleared under the Animal and Fish Resources Department. It will be

financed through a SIDBI Cluster Development Fund (SCDF) loan. Two dairy plants with a processing capacity of 2 lakh litres per day (LPD)each will be set up in Darbhanga and Wazirganj (Gaya), while a third plant with 1 lakh LPD capacity will come up in Gopalganj district. The Darbhanga facility will cost ₹71.32 crore, while the plants at Gaya and Gopalganj will require investments of ₹50.27 crore and ₹54.73 crore, respectively. In addition, two milk powder plants with a capacity of 30 metric tonnes per day (MTPD) each will be established in Dehri-on-Sone (Rohtas) and Sitamarhi districts at a cost of ₹69.66 crore and ₹70.33 crore, respectively.

Govt Aims 50% Rise in Milk Procurement with White Revolution 2.0: Amit Shah

The government is working to increase milk procurement by 50 per cent over the next five years under the cooperative-led White Revolution 2.0, Union Cooperation Minister Amit Shah said on August 05, 2025. Chairing the second meeting of the Parliamentary Consultative Committee, Shah outlined the government's ambitious plans for the cooperative sector, including the target of setting up 2 lakh multipurpose cooperative societies. So far. 35.395 new cooperative societies have been formed under this initiative. "The Ministry of Cooperation is committed to transforming cooperatives into vibrant and successful business units," Shah said, emphasising that the cooperative sector could pave the way to prosperity for landless and poor people. Under the

White Revolution 2.0, significant progress has been made in strengthening the dairy sector. As many as 15,691 new Dairy Cooperative Societies have been registered while 11,871 existing ones have been strengthened, he said. The National Dairy Development Board (NDDB) and 25 Milk Unions across 15 states have signed MoUs to establish biogas plants in dairy cooperatives, according to a statement. The minister highlighted three national-level cooperative societies established for the sector's development. The National Cooperative Organic Limited (NCOL) handles certification, branding, packaging and marketing of farmers' organic products to ensure better prices.

The National Cooperative Export Limited (NCEL) provides facilities for exporting farmers' products internationally, with full profits going to farmers. The Bharatiya Beej Sahkari Samiti Limited (BBSSL) focuses on conservation, storage and production of India's traditional seeds. Shah announced that the Modi government will enter into contracts with small farmers for traditional seeds to ensure they benefit from these initiatives. The ministry has undertaken over 100 initiatives in the past four years to strengthen Primary Agricultural Credit Societies (PACS), dairy, fisheries, cooperative banks, sugar cooperatives and governance systems. These include digital reforms, policy changes, financial support and institutional capacity building. The National Cooperative Policy-2025 provides a comprehensive roadmap for sustainable cooperative development, coordinating with government schemes like Pradhan Mantri Matsya Sampada Yojana (PMMSY) and National Dairy Development Program (NPDD) to strengthen the cooperative ecosystem at the grassroots level. During the meeting, the Ministry of Cooperation made a presentation to the committee on various initiatives

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taken in the last four years. The ministry informed that institutional mechanisms including Inter-Ministerial Committee (IMC), National Level Coordination Committee (NLCC), State Cooperative Development Committees (SCDC), and District Cooperative Development Committees (DCDC) have been established for effective implementation and monitoring.

India Aims to Double Maize Output to 86 mn Tonne by 2047: Agri Minister

India can more than double its maize production to 86 million tonne by 2047 from the current 42.3 million tonne, Agriculture Minister Shivraj Singh Chouhan said on July 07, 2025, calling for development of high-yielding seed varieties with higher starch content. Speaking at the 11th maize summit organised by industry body FICCI, Chouhan said the world's fifth-largest maize producer needs to boost productivity without using genetically modified seeds. "We don't use genetically modified seeds, but we can still raise the productivity levels," Chouhan said. India's average maize productivity stands at 3.7 tonne per hectare, with some states like West Bengal and Bihar performing above the national average, but overall yields need to increase, he said. The Indian Council of Agricultural Research (ICAR) has developed 265 maize varieties, including 77 hybrids and 35 biofortified varieties, but more work is needed, according to the minister. "There is a need to increase starch level in maize. We need to increase it to 72 per cent from the current 65-70 per cent level so that maize can be used in better way," Chouhan said.

India's maize production has grown from 10 million tonne in the 1900s to the current 42.3 million tonne. To boost production, states like Punjab and Haryana, which focus on paddy cultivation, should diversify to maize, the minister said. Chouhan noted that maize prices, which were below the MSP of Rs 2,400 per quintal, have firmed up following the government's ethanol blending target of 20 per cent by 2025-26. The minister expressed concern over the sale of substandard seeds, fertilisers and pesticides, calling for a policy framework to take action against such suppliers and manufacturers. When poultry industry representatives raised concerns about rising maize feed prices, Chouhan said: "I told them let the farmers get the price and we will resolve your issue in different way. The production should rise further." Subroto Geed, President-South Asia at Corteva Agriscience and Co-Chairman of FICCI's Committee on Agriculture, said bridging the demandsupply gap requires collaborative efforts and innovation.

Kharif Foodgrain 2025-26 output Likely to Exceed 171.39 MT Target: Agri Commissioner

The county's kharif foodgrain production is likely to surpass the

government's target of 171.39 million tonne set for the 2025-26 crop year (July-June) buoyed by higher coverage and favourable monsoon rains, Agriculture Commissioner P K Singh said on September 22, 2025. Despite lower coverage, the prospects for oilseeds and pulses crops remain positive as productivity is expected to be higher due to good crop conditions, he said. Speaking to PTI, Singh said damage to crops due to flood and heavy rainfall was minimal compared to the overall sown area in the kharif season.

"The crop condition is good and the overall (kharif foodgrain) production will be more than the targets that we have kept for this year," Singh said on the sidelines of a conference organised by the Biological Agri Solutions Association of India (BSAI). Kharif crops coverage has exceeded that of previous years, rising to more than 110 million hectares from the usual 109.5 million hectares in recent years, driven by increased acreage of paddy and maize, he said.

While some areas reported damage from floods and heavy rains, the affected area was small relative to total sown area, Singh said, adding that the actual damage assessment would be known after floodwaters recede. For oilseeds, particularly soybean, cultivated area was lower but crop conditions remained very good, with the possibility of higher productivity. The same applied to pulses, he said. On rabi (winter) sowing, the agriculture commissioner said it had begun in Rajasthan following early harvesting, with preparations underway elsewhere.

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A Research Marvel for optimum protection and productivity in birds



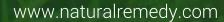






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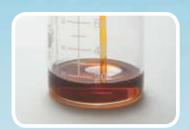
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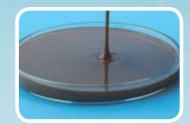
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CLFMA ACTIVITY UPDATES

Press Release - CLFMA of India & Sri Lanka Livestock Meet 01 - 02 July 2025 has been covered in the Magazine Page Nos. 20 to 26. Also, CLFMA delegation extended a special note of thanks to the Sri Lankan delegation for their enthusiastic participation and warm reception. The personal invitation was extended by the Chairman Mr. Divya Kumar Gulati and all Office Bearers for the 58th Annual General Meeting and 66th National Symposium, scheduled for 22nd & 23rd August 2025 at Hotel Taj Deccan, Road No. 1, Banjara Hills, Hyderabad - 500034, and it was well received and appreciated by the visiting dignitaries and officials.

Meeting with NER stakeholders as a follow up of North eastern conclave on 21st July, 2025:

NER Stakeholders Meeting was held on at Chandralok Building, Department of Animal Husbandry, Ministry of Fisheries, Animal Husbandry and Dairying, which was chaired by Shri.Muthukumarawami B., Joint Secretary (NLM), on 21st July, 2025 at 3:00 pm. The meeting was attended by Dr. Sujit K. Dutta, Joint Commissioner (AH), by Dr. H. R. Khanna, Joint Commissioner (NLM) from the Government of India.

Various stakeholders were present for the same viz. Venkateshwara Hatcheries, KPFBA and IB Group and on behalf of CLFMA OF INDIA, Col. Vinay Kumar, CLFMA Executive Director attended the meeting. The Meeting was a follow up meeting for the development of North Eastern Region, held in the month of January, Shillong Meghalaya, which was attended by Ministers' from 8 states of North East.

The Joint Secretary emphasized that 10% of the Budget has been committed for development of North Eastern Region by every department. In view of the same, the investors with ample experience in livestock are required for a sustainable and continuous growth. The Joint Secretary also reiterated that various stakeholders should connect with state governments and Chief Secretaries of the respective states to iron out any teeth in problems.

Krishi Bhavan Visit on $23^{\rm rd}$ and $24^{\rm th}$ July, 2025

CLFMA Chairman Mr. Divya Kumar Gulati, CLFMA MC Member & convenor of the Symposium Mr. Vijay Bhandare along with CLFMA Executive Director Mr. Vinay Kumar visited Krishi Bhavan to personally welcome Prof. S. P. Singh Baghel, Hon'ble Minister of State for Fisheries, Animal Husbandry and Dairying and Minister of Panchayati Raj, Government of India & other Government Key Dignitaries in Department of Animal Husbandry and Dairying to the inaugural session of CLFMA's 58th AGM & 66th National Symposium on 22nd August 2025 in Hyderabad. His presence reaffirms the Ministry's commitment to advancing India's livestock, dairy, and fisheries sectors through dialogue, collaboration, and progressive policy.





CLFMA OF INDIA Chairman Mr. Divya Kumar Gulati attended Inauguration of Cull Bird Single Window Facility in Hyderabad on 27th July, 2025:

CLFMA OF INDIA Chairman Mr. Divya Kumar Gulati attended Inauguration of Cull Bird Single Window Facility in Hyderabad organized by the Telangana Poultry Federation (TPF), with the valuable support of IPEMA / Poultry India Landmark. The Cull Bird Single Window - 5 Regions Building at Pedda Amberpet, near the Outer Ring Road (ORR), Hyderabad. This landmark project is a significant leap in strengthening the poultry infrastructure and operational integration across Telangana and neighboring states. The inauguration was graced by Malreddy Ranga Reddy, Hon'ble MLA of Ibrahimpatnam, and Sri Kasireddy Narayana Reddy, Ex-ZP

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Chairman, Nalgonda & Ex-APPF President, who served as Chief Guests for the occasion. The newly launched facility is envisioned as a centralized hub to streamline cull bird marketing, ensure greater transparency, and boost efficiency in service delivery across five key poultry regions in the state.

Krishi Bhawan visit of Executive Director Col. Vinay Kumar on 11th **August, 2025:**

The personal invitation was extended by the Executive Director Col. Vinay Kumar to Prof. S.P. Singh Baghel, Minister of State Fisheries Animal Husbandry & Dairying, and Ministry of Panchayati Raj, GOI and other key Government Officials of Department of Animal Husbandry and Dairying for the 58th Annual General Meeting and 66th National Symposium, scheduled for 22nd & 23rd August 2025 at Hotel Taj Deccan, Road No. 1, Banjara Hills, Hyderabad - 500034 and he has confirmed his auspicious presence as "Chief Guest" for the same.



66th CLFMA National Symposium 2025 Report has been presented in the magazine under the heading Symposium Report Sub Heading 66th National Symposium 2025 from the page numbers 40 to 111 (58th AGM & 66th National Symposium, 2025, Theme: Animal Agriculture in India - The Way Forward dated 22nd and 23rd August, 2025 at Taj Deccan, Road No.1, Banjara Hills, Hyderabad -500034).

CLFMA of India actively participated

in the Stakeholders Consultation Meeting dated 06th September, 2025:

A Stakeholders Consultation Meeting under the Informal Group of Ministers (IGoM) on Social, Welfare and Security Sectors for the Department of Fisheries under the Ministry of Fisheries Animal Husbandry and Dairying (MoFAHD) was held 6th September, 2025 in hybrid mode to invite suggestions on the four pillars of the IGoM (legislative, policy, institutional, and process reforms) for the fisheries sector. The Meeting was virtually Chaired by Union Minister, MoFAHD and Panchayati Raj, Shri Rajiv Ranjan Singh alias Lalan Singh. Secretary, Department of Fisheries (DoF) Shri Abhilaksh Likhi steered the consultation and feedback session aimed at identifying the challenges and reforms for enhancing production, productivity and exports promotion in the fisheries sector in line with the vision of becoming Viksit Bharat by

While addressing the meeting, Shri. Rajiv Ranjan Singh emphasized that the suggestions from the stakeholders were essential to help in preparing a reform roadmap that focuses on significantly enhancing production, productivity and exports for the fisheries sector. The Union Minister underscored the need to unlock the untapped export potential of inland states to diversify and strengthen India's seafood export portfolio. He welcomed the recent next generation GST reforms under the leadership of Hon'ble Prime Minister Shri. Narendra Modi and said that this step will give a major boost in enhancing the competitiveness of the sector. The Union Minister urged the stakeholders to make collective efforts to improve fish productivity from 5 Ton per Hectare to 7 Ton per Hectare in India to remain globally competitive.

Emphasis was also laid by the Union Minister on export market diversification, certification of produce, technology integration in fish processing, building cold chain infrastructure, enhancing processing capabilities and establishing a robust traceability system to meet global benchmarks. Shri Rajiv Ranjan Singh stated that the fisheries sector directly and indirectly supports over 8 crore livelihoods in the country. He affirmed the Government's commitment to the structural transformation of the sector and noted that the IGoM has been constituted with a clear mandate to develop a comprehensive reform roadmap anchored on four key pillarslegislative, policy, institutional, and process reforms. These pillars, he emphasized, will guide the creation of a resilient, inclusive, and exportoriented fisheries ecosystem.

Dr. Abhilaksh Likhi, Secretary, DoFin his address, highlighted the untapped export potential of the fisheries sector and stressed upon the importance of enhancing its productivity. He urged States/UTs, fishermen associations, exporters, and industry bodies to work in close collaboration and share actionable suggestions.

Joint Secretary, Shri Sagar Mehra, DoF stated that the IGoM will drive reforms through sectoral assessments to identify pain points, challenges in the global benchmarking and current gaps in capacity-building. In his presentation, he highlighted the expansion of marine and inland aquaculture, promotion of high-value species with GI tagging, strengthening of infrastructure, and greater private investment through PPP models.

The meeting also discussed the need to align state-level strategies with PMMSY, PM-MKSSY scheme and the Blue Economy initiative. During the

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meeting, the Stakeholders across the spectrum gave their valuable inputs on issues like development of quarantine centres, technology use for value addition, increasing processing capabilities, need for single window clearance, enhanced traceability, need for uniform land leasing policy/power tariffs, robust infrastructure, setting up of cold storage along with modern markets and transportation facilities, development of seed banks for quality seeds, better access to credit for farmers etc. It was highlighted that focused training institutes for value addition will help in increasing farmer productivity and establishment of export facilitation counters across the country will facilitate exports. The discussion focused on establishing Regional Centres of Excellence, developing capacity-building modules for emerging job roles, expanding saline aquaculture, promoting ecolabelling, and strengthening Brand India by diversifying high-value species exports to enhance market resilience.





CLFMA Hon. Secretary, Mr. Nissar F. Mohammed, actively participated in the meeting and proposed to the Government that Fish Soluble Paste, a key input in the Fish Feed Industry, should be exempted from GST (0%).



The Meeting was attended by a wide spectrum of stakeholders including senior officials from the Department of Fisheries, MoFAHD, States/UTs, NFDB, MPEDA, ICAR institutes, Coastal Aquaculture Authority, Fishery Survey of India, DoF field institutes, representatives of fishermen associations, industry bodies (CLFMA of India, FICCI, CII, ASSOCHAM, PHD Chamber) as well as officials from variousCentral Ministries/ Departments under the IGoM.

Consultation Meeting was organized by Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying, New Delhi dated 12th September, 2025 at 11:00 hours.

The VC Meeting was organized by Department of Fisheries, GOI with Fisheries Industries, Startups, FFPOs & Fisheries Cooperatives, Financial Institutions & Export Associations to discuss the proposal for continuation of Pradhan Mantri Matsya Sampada Yojana (PMMSY) as Phase-II during period of next five years from FY 2026-27 to FY 2030-31. The topic of the meeting was Consultation Meeting with Fisheries Industries, Startups, FFPOs & Fisheries Cooperatives, Financial Institutions scheduled from 11:00 hours to 13:30 hours. On behalf of CLFMA OF INDIA, the meeting was attended by Mr. Nissar F. Mohammed, Hon. Secretary, CLFMA OF INDIA.

A Virtual Workshop was organised by the Department of Fisheries, Ministry of Fisheries, Animal

Husbandry and Dairying, New Delhi, on 12th September 2025 at 3:00 PM.

The virtual workshop, held on the Fisheries and Aquaculture Infrastructure Development Fund (FIDF) in collaboration with fisheries and aqua industry associationsincluding CLFMA OF INDIA-covered all States and Union Territories. The objective of the virtual workshop was to encourage fisheries associations to actively participate and promote the establishment of world-class fisheries infrastructure projects through the fisheries private sector. On behalf of CLFMA OF INDIA, the meeting was attended by Mr. Nissar F. Mohammed, Hon. Secretary, CLFMA OF INDIA.

ASCI's 12th Annual General Meeting held on 15th September, 2025:

12th Annual General Meeting of the members of Agriculture Skill Council of India held on Monday, 15th September 2025 from 12.00 p.m. onwards. The Meeting was attended by Ms. Shilpa Utekar, Manager, CLFMA OF INDIA. Dr. Satender Singh Arya, CEO, informed to the members that Mr. Balram Singh Yadav had assume as new Chairman of Agriculture Skill Council of India w.e.f. 1st August 2025. Overall, the proceedings, of the meeting was good.

Press Release - CLFMA of India Delegation Strengthens U.S.-India Agricultural & Livestock Collaboration Through In-Depth Knowledge Exchange (20th September 2025 to 1st October, 2025) has been covered in the Magazine Page Nos. 27 to 30.

CLFMA of India's 58th AGM 2025

The Compound Livestock Feed Manufacturers Association of India (CLFMA of India) commenced Day 1 of its proceedings with the 58th Annual General Meeting (AGM), followed by the inaugural session of the 66th National Symposium, 2025. The event, held at Hotel Taj Deccan, Road No. 1, Banjara Hills, Hyderabad, was anchored around the theme "Animal Agriculture in India -The Way Forward," setting the tone for meaningful deliberations.

The 58th Annual General Meeting and the 66th National Symposium 2025 took place on 22nd and 23rd August 2025 under the Chairmanship of Mr. Divya Kumar Gulati.

CLFMA Executive Director Mr. Vinay Kumar, welcomed CLFMA Members and read the Notice and Agenda. CLFMA Chairman, Mr. Divya Kumar Gulati gave a short welcome address. The meeting opened with the reading of the Minutes of the 57th Annual General Meeting, held on 20th September, 2024 at Novotel Goa Resort and Spa, Pinto Waddo, Candolim Road, Bardez, Goa, by CLFMA Hon. Secretary Mr. Nissar F. Mohammed. The 57th Annual General Meeting Minutes were unanimously approved by the members present. This was followed by the presentation of the Annual Report for the financial year 2024-2025 by CLFMA Hon. Secretary Mr. Nissar F. Mohammed, which was approved by the house. CLFMA Deputy Chairman, Mr. Abhay Shah gave a comprehensive update on CLFMA PR activities for the betterment of Livestock Sector. CLFMA Treasurer Mr. R. Ramkutty along with Mr. Rohan Dedhia, Chartered Accountant of M/s. Naveen Dedhia and Co., then presented the Audited Statement of Accounts and Audit Report for the year ending 31st March, 2025. CLFMA Treasurer Mr. R. Ramkutty requested Hon. Secretary Mr. Nissar F. Mohammed, to present the audited statement of accounts in detail to the members present, which was also unanimously adopted by the members. It was further resolved that Mr. Rohan Dedhia, Chartered Accountant of M/s. Naveen Dedhia and Co. would continue to serve as CLFMA's Auditor for the financial year 2025-2026. The 58th Annual General Meeting concluded with discussions on other matters of significance, taken up with the permission of the Chair by CLFMA Hon. Secretary Mr. Nissar F. Mohammed.



66th National Symposium 2025 "Animal Agriculture in India - The Way Forward"

REPORT: CLFMA of India organised the two-day Symposium and has compiled this report, detailing the deliberations and key outcomes of the event.

Presented by: Mr. Divya Kumar Gulati, Chairman, CLFMA OF INDIA

CLFMA OF INDIA - ASSOCIATION OF LIVESTOCK SECTOR conducted its 58th Annual General Meeting and 66th National Symposium 2025 on 22nd and 23rd August, 2025 at Hotel Taj Deccan, Road No. 1, Banjara Hills, Hyderabad.

The event drew over 450 participants, spanning industry leaders, feed manufacturers, aqua and dairy farmers, animal health and nutrition experts, academics, government officials, and ambassadors and high commission representatives from multiple countries, reflecting the diverse and collaborative nature of India's livestock ecosystem.

The 66th National Symposium 2025 was held under the theme "Animal Agriculture in India – The Way Forward," providing a platform to deliberate on emerging trends, identify sectoral opportunities, and formulate practical strategies for sustainable growth. A distinctive feature of this year's event was the launch of the CLFMA Students Program, aimed at bridging the gap between academia and industry. Students from across India submitted research projects in poultry, dairy, swine, and aquaculture, with top entries being recognised with cash prizes, certificates, and opportunities for direct engagement with leading industry professionals. This initiative highlighted CLFMA's commitment to nurturing innovative talent and fostering a future-ready workforce in animal agriculture.

The 66th National Symposium 2025 also underscored the importance of strengthened collaboration between industry and government to advance policy implementation and sectoral development. Discussions focused on promoting innovative approaches, enhancing institutional frameworks, and ensuring the provision of high-quality products and services to farmers. With active contributions from both public and private sector experts, the session-wise deliberations generated actionable insights, which have been systematically compiled and presented in this report to guide future initiatives and support the growth of India's livestock sector.

Day 1 Symposium Proceedings:

The Inaugural Session of the CLFMA of India's 66^{th} National Symposium concluded on a high note on Friday, 22 August 2025, at Hotel Taj Deccan, Road No. 1, Banjara Hills, Hyderabad. The session brought together esteemed dignitaries, policymakers, and industry leaders who shared valuable insights on the future of animal husbandry, dairying, and fisheries in India.

The proceedings began with an auspicious lamp-lighting ceremony, graced by Chief Guest Prof. S.P. Singh Baghel, Hon'ble Minister of State for Fisheries, Animal Husbandry & Dairying, and Minister of Panchayati Raj, Government of India. The occasion was further honoured by the presence of Guest of Honour Sri Vakiti Srihari, Hon'ble Minister for Animal Husbandry, Dairy Development & Fisheries, Sports and Youth Services; Special Guests Sri Sabyasachi Ghosh, IAS, Special Chief Secretary, Government of Telangana; Dr. Muthukumaraswamy B., Joint Secretary (NLM), Department of Animal Husbandry & Dairying; Shri. Tarun Shridhar, IAS (Retd.); and Shri Eatala Rajendra, Member of Parliament, Government of Telangana. Shri. Mettu Saikumar, Chairman of Fisheries Federation, Telangana, etc. CLFMA Office Bearers, including Chairman Mr. Divya Kumar Gulati, Convenor Mr. Vijay Bhandare, and Hon. Secretary Mr. Nissar F. Mohammed, were also present. As a mark of respect, Chairman Mr. Divya Kumar Gulati felicitated Prof. S.P. Singh Baghel, Hon. Minister of State for Fisheries, Animal Husbandry & Dairying and Minister of Panchayati Raj, GOI with a bouquet, shawl, and memento.









































Following the formal welcome, Mr. Vijay D. Bhandare, Convenor and Managing Committee Member of CLFMA of India, set the stage by highlighting the sector's economic significance across dairy, poultry, aquaculture, and small ruminants. He emphasised India's global leadership in dairy and poultry production, its 8-10% contribution to GDP, and the sector's role in providing sustainable livelihoods. Drawing attention to nutrition-linked policies, Mr. Vijay Bhandare urged the Government of Telangana to enhance nutritional support by increasing egg distribution in schools, recognising its impact in combating malnutrition. His address effectively set the tone for the deliberations to follow, centred on opportunities, challenges, and strategies for advancing the animal agriculture sector.



Building on this momentum, Chairman Mr. Divya Kumar Gulati, CLFMA of India, delivered a comprehensive address, spotlighting the sector's impact on rural livelihoods, national food security, and India's global agri-trade position. He underscored the need for collaboration among industry associations to strengthen the livestock ecosystem and highlighted initiatives to attract veterinary talent through industry-academia programmes across six to seven locations. Presenting India's achievements, he cited production of over 210 million metric tonnes of dairy, 140 billion eggs, nearly 1 million metric tonnes of shrimp, and 7-8 million metric tonnes of poultry meat annually. India ranks among the top four globally in feed production at 60

million metric tonnes, with poultry consuming 40 million metric tonnes of corn, 27 million metric tonnes of soya meal, and 8 million metric tonnes of other ingredients. With poultry feed demand projected to reach 96 million metric tonnes by 2040, he stressed the urgency of planning ahead. While noting robust growth, he urged collective action for sustainability, highlighted concerns over the recent 50% shrimp export tariff, and appealed for stronger government support to unlock the sector's full

potential.



Setting the tone for the discussions, Shri Tarun Shridhar, IAS (Retd.), delivered the thematic address at the inaugural session of CLFMA's 66th National Symposium 2025. He highlighted the economic strength of India's livestock, fisheries, and aquaculture sectors, which together contribute ₹22 lakh crore-38% of agricultural GDP-with India leading globally in milk production and sustaining consistent growth above 8%. While acknowledging CLFMA's success in uniting diverse subsectors, he underscored the need for greater inclusion of primary producers and identified low productivity as the sector's biggest challenge, alongside high input costs, feed quality concerns, genetic stock limitations, and policy debates on GM crops. He cautioned against hidden biases and campaigns discouraging livestock consumption, stressing the importance of countering misinformation on issues like antimicrobial resistance and greenhouse gas emissions with credible data. On trade, he advised reducing reliance on exports, citing vulnerabilities in shrimp markets, and urged strengthening India's vast domestic base while repositioning agencies like MPEDA and APEDA as facilitators of trade and marketing. Concluding, he called on industry associations such as CLFMA to collectively educate consumers with science-backed information and push for policies that prioritise productivity, value creation, and sustainable economic returns across the value chain.



With the thematic address providing a strategic vision, the Symposium shifted its focus from policy to people.

A highlight of the inaugural session was the presentation of the prestigious CLFMA Lifetime Achievement and CLFMA Awards. Mr. Pravin S. Lunkad was honoured with the Lifetime Achievement Award for his exceptional journey and enduring impact in the animal feed industry, while Dr. K. Karthikeyan and Prof. Jyoti Palod received the CLFMA Award in recognition of their transformative work and steadfast dedication to advancing the sector.

























The award ceremony brought a personal dimension to the proceedings. Expressing gratitude, Mr. P. S. Lunkad reflected on his decades-long experience, sharing anecdotes that were both insightful and inspiring. Dr. K. Karthikeyan and Prof. Jyoti Palod also thanked CLFMA of India for the recognition, recalling how their professional journeys had enriched their knowledge, shaped their careers, and forged lasting connections. Their words created a moment of inspiration and set the stage for the Symposium's next segment.



Carrying forward the theme of nurturing future leadership, CLFMA of India launched a Student Program Initiative at this year's Symposium. The platform was created to spark curiosity, encourage innovation, and connect young minds with the realworld challenges and opportunities of animal agriculture. The initiative saw an overwhelming response, drawing 134 students from across the country who presented research and ideas in four vital sectors-Poultry, Dairy, Swine, and Aqua. Their topics spanned unconventional feed ingredients, gut health management, climate-resilient dairy practices, biosecurity in swine farming, and advanced technologies in aqua feed production, showcasing the potential of youth-led innovation in shaping sustainable livestock practices.

To recognise and reward these efforts, winners in each sector were felicitated with gold, silver, and bronze awards, carrying cash prizes of ₹1 lakh, ₹50,000, and ₹25,000, respectively, along with travel and stay benefits. The awards were presented in the presence of industry leaders and academicians. Beyond the recognition, this initiative marked a significant step in strengthening the academia-industry bridge, ensuring that the livestock sector remains future-ready through the active involvement of young researchers and professionals. Thanks to Dr. A. S. Ranade's effective coordination, the student programme was a great success.























































Student Winner List:

- Poultry Sector Awards: Gold Dr. Prasad Shivaji Wadajkar, Silver Dr. Vishal Patil, Bronze Dr. Jalmeen Kourector
- Dairy Sector Awards: Gold Dr. Lanje Sunita Khushal; Silver Dr. Banoth Vennela
- Swine Sector Awards: Gold Dr. Hrishikesh Tekade; Silver Dr. Kanishk Kamble; Bronze Dr. Ashish Tiwari
- Aqua Sector Awards: Gold Dr. Tamana Latief; Silver Mr. Patekar Prakash Goraksha; Bronze Dr. Bhupika Dewangan
- Student Program Awards: Poultry Dr. Nikhil Nalabale; Dairy Dr. Rashmi Thakare; Swine Dr. Easteri Debbarma

After recognising both stalwarts and emerging talent, the session turned once again to policy perspectives from government leaders.

Dr. Muthukumaraswamy B., Joint Secretary (NLM), Department of Animal Husbandry & Dairying, highlighted the government's focus on strengthening the livestock and feed industry through initiatives such as the National Livestock Mission, infrastructure development schemes, and breed improvement programs across cattle, sheep, goats, pigs, and camels. He stressed the need to unlock potential in underdeveloped sectors like sheep and goat farming and encouraged greater investments in North and North-Eastern states. Citing the poultry sector's transformation through private participation, he urged closer collaboration between industry and research institutes to drive innovation in areas like feed, biosecurity, and antimicrobial resistance. The Hon'ble Minister also announced plans to establish 500 livestock-specific Farmer Producer Organisations (FPOs) to improve market access, input utilisation, and value chain efficiency, reaffirming the government's commitment to building a more sustainable, resilient, and globally competitive livestock sector. He called upon industry leaders, cooperatives, and entrepreneurs to seize these opportunities and work in tandem with policy frameworks to secure a stronger future for animal agriculture.



Further enriching the policy dialogue, Special Guest Sri Sabyasachi Ghosh, IAS, Special Chief Secretary, Government of **Telangana**, urged the industry to move beyond current challenges and prepare for the disruptions ahead. He cautioned that global developments, including the impact of free trade agreements, could significantly reshape the livestock and feed sectors. Emphasising the need for foresight, he called on stakeholders to focus on quality, productivity, and sustainability, and adopt species-specific as well as geography-specific approaches. Highlighting the role of technology and genetic research, he stressed

SYMPOSIUM REPORT_

that innovations such as AI, mRNA, and DNA studies will be crucial to improving feed quality and competitiveness. While noting that government support has its limits, he encouraged industry players to invest in research, development, and collaboration to stay resilient. He concluded with a call for collective action to address future challenges and strengthen India's position in the global food chain.



Special Guest Shri. Eatala Rajendra, Member of Parliament, Government of Telangana, in his address, underscored the pivotal role of the livestock and feed industry in employment generation, nutrition, and rural growth. He stressed the need for synergy between government support, private sector initiatives, and research to ensure long-term sustainability. Highlighting poultry as a key source of affordable protein and inland fisheries as an emerging opportunity in Telangana, he urged stakeholders to leverage technology and innovation while addressing challenges such as price fluctuations. He concluded with a call for collective action to strengthen the sector for both farmers and consumers.



Guest of Honour Sri. Vakiti Srihari, Hon'ble Minister for Animal Husbandry, Dairy Development & Fisheries, Sports and Youth Services, reinforced that animal husbandry, dairy, and fisheries remain the backbone of Telangana's rural economy, supporting millions of livelihoods. He outlined state initiatives, including free vaccination drives, rural veterinary centres, genetic improvement programmes, and subsidies for equipment and cold storage to enhance productivity. He further highlighted Telangana's push in aquaculture through large-scale seed distribution, training, and financial support for modernisation. Looking forward, he emphasised sustainability, technology adoption, and collaboration with industry bodies like CLFMA as key drivers for future growth and resilience in animal agriculture.



LIVESTOCK & FEED TRENDS 51

Taking the stage as Chief Guest, Prof. S. P. Singh Bhagel, Hon'ble Minister of State for Fisheries, Animal Husbandry & Dairying, and Ministry of Panchayati Raj, Government of India, delivered an engaging address that blended policy vision with personal reflections, leaving a deep impression on delegates. He drew parallels between animal agriculture and crop farming, describing them as "two sides of the same coin" that are inseparable in the lives of Indian farmers. Calling for more meaningful dialogue, he urged stakeholders to go beyond ceremonial platforms and engage in "open discussions in closed rooms" to candidly address challenges at the district, state, and national levels.

Drawing from his own association with shepherd and fishing communities, the Minister emphasised that animal husbandry is not just an economic activity but a way of life deeply embedded in India's social fabric. With millions of families depending on livestock for their livelihoods, he stressed that the sector deserves equal policy priority alongside agriculture.

He reiterated the Prime Minister's vision of doubling farmers' incomes, pointing out that this goal cannot be achieved by crop production alone. Complementary activities such as aquaculture, poultry, piggery, goat and sheep rearing, horticulture, and modern irrigation are essential to enhancing rural prosperity. He also advocated for greater autonomy for animal husbandry and fisheries within the broader agricultural framework, calling for dedicated councils and specialised research institutions to ensure innovations reach farmers in practical, accessible forms.



Key Highlights of the Address:

- Animal agriculture and crop farming are inseparable in Indian farming systems.
- Doubling farmers' incomes requires diversification into livestock, fisheries, and allied activities.
- Separate ICARs for Animal Husbandry and Fisheries would strengthen research and technology dissemination.
- Milk production has grown by over 26% since 2014, with per capita availability rising from 307 to 471 grams per day.
- Egg production has crossed 142 billion annually, positioning India as the world's second-largest producer.
- Meat production has reached 10 million tonnes, boosting both domestic supply and rural employment.
- Over 3.3 million people are directly or indirectly employed in livestock-related activities, with nearly 280 million farmers engaged in animal rearing.

These milestones, he noted, underline the sector's vast potential to strengthen food security and rural livelihoods. At the same time, he candidly highlighted challenges, particularly the fodder deficit-40% in green fodder and 30% in dry fodder-which hampers animal health and productivity. He called on industry, academia, and policymakers to collaborate on scientific feed practices, land-use optimisation, and innovations in animal nutrition.

On the global front, the Hon'ble Minister stressed the need for diversification, value addition, and quality improvement to enhance India's competitiveness. With fisheries exports already valued at over ₹60,000 crore, he urged stakeholders to strengthen resilience against global trade fluctuations while ensuring compliance with international quality benchmarks.

Sharing a personal anecdote, he reflected on the power of recognition and awards in motivating young professionals. Just as his first award as a student boosted his confidence, he encouraged timely recognition of veterinarians, scientists, and researchers to inspire greater dedication to the sector.



CAPSANTAL CX

Red Pigment: Canthaxanthin 10%

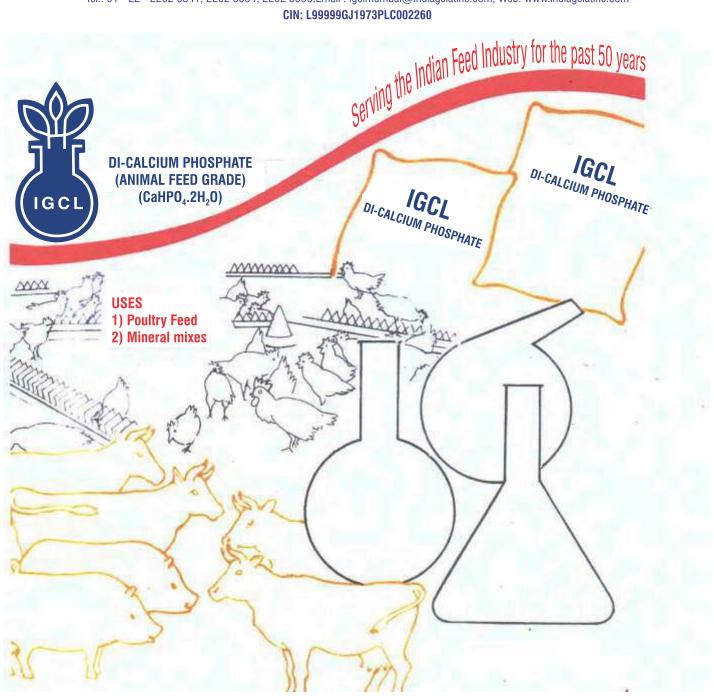
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SPECIFICATIONS

 (1) Moisture content
 7.0% Max

 (2) Phosphorous as "P"(Total)
 16.6-18.3 %

 (3) P205 (Total)
 38-41 %

 (4) Calcium as CA
 23.0 % Min

 (5) Acid insoluble ash
 1.0 % Max.

 (6) Flourine as F
 0.2 % Max.

N.B.: The contents for item (2) to (6) are on moisture-free basis.

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In his closing remarks, the Minister expressed gratitude to CLFMA of India for providing a platform that unites industry leaders, scientists, policymakers, and farmer representatives. He assured continued government support and encouraged participants to think boldly, collaborate deeply, and innovate consistently. With this collective effort, he said, India can not only achieve domestic food security but also emerge as a global leader in livestock and fisheries by 2047.

Day 1 concluded with the launch of the Souvenir, followed by a live band with singers' performance that entertained the attendees. Sponsors, Associations, CLFMA Guests, Special Invitees as well as the Media, CLFMA PR team and CLFMA Staff of the Symposium were felicitated on stage by Mr. Divya Kumar Gulati with mementoes, in recognition of their valuable support, reflecting CLFMA's appreciation for their partnership in making the event a success.



Mr. Nissar F. Mohammed, Hon. Secretary, CLFMA of India, then delivered the vote of thanks, expressing gratitude to all participants and stakeholders. The session ended on a high note with a networking dinner, providing delegates with an opportunity to connect and engage further.



Day 2 Symposium Proceedings:

The Welcome of National Symposium 2025 Day 2 was addressed by Mr. Divya Kumar Gulati, Chairman, CLFMA of India, followed by the introduction of the Symposium by Dr. Devender Hooda, CLFMA of India. Mr. Sumit Sureka, Dy. Chairman, briefed about the CLFMA, the theme of the Symposium, the full day sessions, and highlighted CLFMA's significant role in contributing towards Viksit Bharat.

The session began with a warm welcome to participants from across India and recognition of the sponsors and partner associations who made the symposium possible. Platinum Sponsors such as Godrej Agrovet Ltd., USGC and USSEC, Gold sponsors such as Berg and Schmidt India Pvt. Ltd., Cargill India Pvt. Ltd., Famsum Co. Ltd., Kemin Industries South Asia Pvt. Ltd., Nanda Feeds Pvt. Ltd., Natural Remedies, Nurture Aqua Technology Pvt. Ltd., Shivshakti Agro India Pvt. Ltd. And Silver Sponsors Bhavani Agrovet Ltd., Himalaya Wellness Company, Huvepharma SEA (Pune) Pvt. Ltd., Noveltech Feeds Pvt. Ltd., Pranav Bitek Agrotech Pvt. Ltd., Rossari Biotech Limited, Shanthi Fees Pvt. Ltd., and alongside Bronze sponsors like AB Vista South Aia, Allanasons Pvt. Ltd., Alltech Biotechnology Pvt. Ltd., Coastal Exports Corporations, DSM Nutritional Products India Pvt. Ltd.,

Evonik, Glocrest Pharmaceuticals, Godrej Foods Ltd., Indian Herbs Specialities Pvt.Ltd., Jainex Speciality Chemical, Komarla Feeds, Niswin Enterprises, Nuqo Animal Nutrition India Pvt. Ltd., Regen Biocrops, Spectoms Engineering Pvt. Ltd., Swathi Hatcheries, Trouw Nutrition India Pvt. Ltd., Zamira Lifesciences India Pvt. Ltd., Zhejiang NHU Co. Ltd., were honoured with mementoes. CLFMA honoured several associations with mementos, including the Indian Dairy Association, All India Poultry Breeders Association (AIPBA), Progressive Dairy Farmers Association (PDFA), IPEMA, INFAH, IVPI, VIP, PFI, WBPF, BCC, All India Shrimp Hatchery Association, SAP, Telangana Poultry Federation, World Veterinary Poultry Association, Telangana Poultry Breeders Association, KPFBA and others, acknowledging their valuable contributions to the livestock ecosystem. This ceremonial gesture set the stage for the day's deliberations, reinforcing the collaborative spirit across Dairy, Poultry, and Aqua sectors.

The theme of the Symposium, "Animal Agriculture in India - The Way Forward," was formally introduced, underlining the sector's role in livelihood, nutrition, and economic growth. With animal husbandry contributing nearly 30% to India's agricultural GVA and around 6% to national GDP, the discussions aimed to address opportunities and challenges in making India's livestock sector more sustainable, competitive, and globally relevant. The day's sessions were designed to cover sectoral progress, resource and input management, long-term policy alignment, and health challenges, providing a holistic roadmap for strengthening animal agriculture in alignment with India's development vision.

With the inaugural addresses laying out the broader vision for the livestock sector, the sessions then moved to detailed presentations from key industry leaders, each representing a vital subsector-dairy, poultry, aqua, and feed. These presentations were designed to capture the sectoral progress, highlight pressing challenges, and outline opportunities for sustainable growth.



The first of these was the dairy sector, presented by Speaker Dr. R. S. Sodhi, President of the Indian Dairy Association. He highlighted India's strong position as the world's largest milk producer, contributing nearly one-fourth of global output with an annual growth rate of 4.5-5%, far higher than the global average. He credited the White Revolution and the cooperative model for empowering millions of smallholder farmers, noting that India's unique structure ensures 71% of the consumer rupee reaches producers, unmatched anywhere in the world. India currently produces 65 crore litres of milk daily, with 30% handled by the organised sector. If the current pace continues, milk production is projected to triple by 2048, touching 628 million tonnes and accounting for 45% of global supply.

Looking ahead, he stressed that India could become a major global dairy exporter, with a potential surplus of 100-110 million metric tonnes by 2047. At the same time, he emphasised key challenges: nearly 70% of production costs stem from feed, and compound feed demand, valued at ₹2.3 lakh crore today, may triple over the next 25 years. Low animal productivity, inefficient breeding and feeding practices, and the need for technology adoption remain critical barriers. He urged the sector to focus on cost competitiveness, innovation, and farmer-centric value chains while guarding against external pressures from global dairyexporting nations.

Key Points from Dr. R. S. Sodhi's Address:

- India contributes 24-25% of global milk production, growing at 4.5-5% annually (global average <2%).
- 65 crore litres/day current production; 30% handled by organised sector (cooperatives + private).
- 71% of consumer rupee goes back to farmers (global average 35-40%).
- Milk production has tripled every 25 years; projected to reach 628 MMT by 2048 (~45% of global supply).
- India could achieve a surplus of 100-110 MMT by 2047, opening export potential.
- Feed constitutes 70% of production costs; the compound feed market (₹2.3 lakh crore) is expected to triple in 25 years.
- Challenges: low productivity, breeding & feeding inefficiencies, and technology adoption gaps.
- Global pressure from the USA, the EU, and New Zealand to open Indian dairy markets-India defends self-sufficiency.
- Dairy contributes 24% of agricultural GDP and empowers 100+ million farmers, most of them women and landless labourers.

Concluding, he reiterated the dairy sector's unique role in empowering rural households, particularly women and landless labourers, and its contribution of nearly 24% to agricultural GDP, positioning it as a true engine of inclusive growth. Following his detailed presentation on the dairy sector, Dr. R. S. Sodhi was felicitated by DY. Chairman, Mr. Sumit Sureka, CLFMA of India, in recognition of his contribution and valuable insights.



Taking over from the dairy sector, the next presentation focused on poultry-an industry valued at around ₹3 lakh crore and recognised as one of the fastest-growing segments of Indian livestock. Delivering the address, speaker Dr. Girish Kolwankar, Director, Premium Chick Feeds Pvt. Ltd., set the context by stating that the sector stands at a crucial juncture of opportunities and challenges. He emphasised that poultry is not just an affordable protein source, but also a vital contributor to rural incomes, accounting for nearly 6% of household earnings in rural India, and a significant part of the national economy.

Key Points from Dr. Girish Kolwankar's Address:

- Poultry industry valued at ₹3 lakh crore; fastest-growing livestock segment.
- Per capita consumption gap (India: 5 kg; global: 15 kg) offers huge growth potential.
- Poultry provides affordable protein and contributes ~6% to rural household incomes.
- Opportunities: rising exports (15-20% annually), sectoral integration, affordability, health-conscious diets, improved genetics and AI-driven efficiency.
- Challenges:
 - **Diseases:** HPAI causes 25-60% mortality, consumer fear, fake news, and price crashes.
 - Emerging infections: kidney-related diseases spreading across regions, lacking a clear aetiology.
 - **Biosecurity gaps:** 15% of farms still follow backwards practices.
 - **Antibiotic resistance** and hygiene issues in live bird markets (95% of supply).
- HPAI mortality has reached 25-60% in regions including West Bengal, Assam, and Telangana, with prolonged outbreaks causing uncertainty for farmers and integrators.

- Indian poultry feed costs are 25-30% higher than in Brazil and the US due to GMO restrictions, affecting domestic affordability and export competitiveness.
- Urgent call for collective industry action and government support to prevent an existential crisis and position India as a global poultry leader.

Concluding his presentation, Speaker Dr. Girish Kolwankar emphasised that by focusing on disease control and feed cost optimisation, the industry can fully realise its strong growth potential. He remained optimistic that with collective industry action, scientific innovation, and government support, India is poised to become the world's leading poultry producer. In recognition of his comprehensive and thought-provoking presentation on the poultry sector, Dr. Girish Kolwankar was felicitated by former Chairman Mr. Neeraj Kumar Srivatsava, CLFMA of India.



The discussion then turned towards aqua, and Speaker **Dr. Manoj Sharma, founder of Mayank Aquaculture Private Limited and a renowned expert in shrimp farming**, addressed the current state and challenges of India's shrimp farming sector. He highlighted the pressure on farmers due to rising costs and market volatility, stressed the untapped potential of domestic consumption, and emphasised the nutritional and economic value of shrimp. Dr. Sharma also spoke about operational risks like disease and early harvesting and underlined the need for coordinated action among farmers, industry stakeholders, and policymakers to strengthen the sector.

Key Points from Dr. Manoj Sharma's Address:

- India's shrimp production in 1994: 45,000-55,000 tons; global traded shrimp: 6.5 million tons.
- India and Ecuador together supply 80% of the world's traded shrimp.
- Post-COVID production costs increased by ~33%, while global prices fell 18-22%.
- India's population: 1.5 billion, with 77% non-vegetarians.
- Disease outbreaks like white spot contribute to 25-35% failure rates among farmers.
- $\bullet \ \ Consumer \ education \ on \ nutrition \ and \ cooking \ convenience \ is \ critical \ for \ increasing \ shrimp \ consumption.$
- Culinary innovation and adaptation to regional tastes can drive market acceptance in traditionally non-shrimp-eating regions.
- Local distribution of smaller shrimp sizes can reduce losses and maintain profitability.
- $\bullet \ \ Shrimp is a high-protein, nutrient-rich, and convenient food source for consumers.$

He concluded his presentation by emphasising the importance of strengthening domestic markets and supporting farmers to ensure sustainability and resilience in the aquaculture sector. In recognition of his contributions and pioneering work in shrimp farming, the chairman, Mr. Divya Kumar Gulati, felicitated Dr. Manoj Sharma.

Following the conclusion of the presentation, the Symposium transitioned into a series of engaging panel discussions. These brought together leading experts, policymakers, and industry stakeholders to deliberate on critical issues shaping the future of animal agriculture in India. The panels explored strategies to enhance supply chain efficiency, mitigate disease risks, and expand market access, offering actionable solutions to strengthen the sustainability, profitability, and resilience of the livestock sector.

Session 1:

The First session was titled "Feed, Raw Materials and Other Inputs - Balancing the Balance Sheet"

Moderator: Dr. O. P. Chaudhary (Retd. JS NLM/PC)

Panelists:

Mr. R. Ramkutty (Broiler Coordination Committee)

Dr. R. S. Masali, Associate Vice President - Nutrition, Godrej Agrovet Ltd.

Dr. P. S. Mahesh, Joint Commissioner and Director, CEAH-Bengaluru

Dr. Gagan Garg, Dy. Commissioner of Trade, Department of AH&D, GOI

Dr. N. C. Manju, Animal Nutritionist

Mr. Jaison John, CLFMA MC Member



Session Highlights:

Dr. Saikat Saha, West Zone President, CLFMA of India, took the stage to introduce the first session of the symposium titled "Feed Raw Materials and Other Inputs - Balancing the Balance Sheet." He introduced the Session I Moderator Dr. O. P. Chaudhary (Retd. JS NLM/PC) and invited him on the stage. He also introduced & invited all the distinguished panellists on the stage. All the esteemed guests were presented with mementoes.

Session 1 Moderator Dr. O. P. Chaudhary (Retd. JS NLM/PC)

Session 1 Moderator Dr. O. P. Chaudhary (Retd. JS NLM/PC) set the stage for the panel discussion, noting that after more than three hours of presentations, only half the audience remained, and emphasising the need to make the session engaging. He introduced the topic, Feed, Raw Materials, and Inputs-Balancing the Balance Sheet, explaining that "balance" refers to sustainability in two ways: preserving natural resources and ensuring consistent profitability for growth. He invited panellists to share practical insights, highlighting that the discussion would cover poultry, aquaculture, feed, raw materials, and additives, with a focus on maize and soybean. Key concerns included maize diversion to ethanol, the need for alternative feed sources, and the impact of global events, trade agreements, and tariffs. He stressed the competition between human and livestock consumption of food grains and the importance of accurate, independent data from associations like CLFMA to guide policy. Drawing on his government experience, he highlighted the need for private-sector investment in research and technology for long-term resilience. He also noted the role of policy in fostering fairness and called for quality feed to be accessible to all, balancing costs, nutrition, and outputs. He concluded by inviting panellists to share insights on achieving sustainability-both material and financial-in the industry.

Session 1 Panellists:

Mr. R. Ramkutty (Broiler Coordination Committee)

Mr. R. Ramkutty (Broiler Coordination Committee) highlighted the importance of striking a balance between profitability,

sustainability, and long-term resilience in the poultry sector. He pointed out that while India is on the path to becoming the world's third-largest economy and already ranks among the global leaders in shrimp and dairy production, the focus for the poultry sector must extend beyond revenue to strengthening balance sheet stability. He stressed that profitability cannot be short-lived but must be sustained through collective industry efforts, efficient use of resources, and price stability in end products.

He traced the evolution of raw material use in poultry feed, noting the shift from dependence on soybean meal and corn towards alternatives such as DDGS (Distillers Dried Grains with Soluble) and synthetically produced amino acids like methionine, lysine, valine, and tryptophan. While these developments have reduced reliance on traditional sources and opened cost-saving avenues, India's continued dependence on imports for amino acids underlines the need for local production.

Logistics costs, which account for nearly 20-25% of feed expenses, seasonal volatility in commodity prices, and rising MSP-driven input costs for corn and soybeans were highlighted as major challenges affecting profitability. He further emphasised the need for improved infrastructure and quality assurance to avoid issues like inconsistent protein content, toxins, and moisture in raw materials. Mr. Ramkutty concluded by urging the sector to collectively work towards price stability and resilience, remarking that "the future may be uncertain, but it is for us to create it together."

Pointers:

- 1. "Profit is the lifeblood of any business. Revenue is vanity, profit is sanity."
- 2. "India is moving towards becoming the third-largest economy in the world, with leading positions in shrimp and dairy production."
- 3. "Balance sheet stability is more important than short-term revenue gains."
- 4. "The sector has moved from dependence on soybean meal and corn to DDGS and synthetic amino acids."
- 5. "India continues to rely on imports for amino acids, creating a case for indigenous production."
- 6. "Logistics contribute nearly 20-25% of raw material costs, impacting profitability."
- 7. "Seasonal fluctuations cause 30-40% volatility in feed prices, especially corn."
- 8. "Rising MSPs for corn and soybeans directly affect the cost of poultry production."
- 9. "Quality issues such as toxins, high moisture, or inconsistent protein levels must be addressed."
- 10. "Profitability depends on maintaining price stability of end products."
- 11. "In the past, industry coordination on supply-demand helped stabilise broiler prices."
- 12. "The future may be uncertain, but it is for us to create it through collective effort."

Dr. R. S. Masali, Associate Vice President - Nutrition, Godrej Agrovet Ltd.

Dr. R. S. Masali, Associate Vice President - Nutrition, Godrej Agrovet Ltd. shared his perspective on the challenges and opportunities in livestock feed from a corporate nutritionist's viewpoint. He described nutrition as a balancing act, impacted by rising feed costs, volatile raw material prices, and the need for continuous innovation. He highlighted that despite high feed prices, innovations in nutrition, management practices, and technology, such as IVF, are driving productivity improvements. He acknowledged the role of farmer awareness and industry collaboration in supporting growth, while stressing that consistent quality and affordability must remain central. He concluded by recommending quicker import approvals for raw materials like jowar and continued government support for innovative feed molecules to strengthen the sector.

Pointers:

- 1. "Working as a commercial nutritionist is a balancing job, and truly challenging."
- 2. "Feed prices remain high due to volatile protein and energy sources like corn and oil."
- 3. "Despite challenges, innovations in nutrition and management are transforming the sector."
- 4. "The Indian dairy sector will command worldwide recognition with improved practices and fewer animals."
- 5. "Farmer education and knowledge sharing are key drivers of change."

- 6. "Products more expensive than broiler feed are being adopted by farmers in some states."
- 7. "The ban on export of de-oiled rice bran has ensured availability of a vital raw material for feed."
- 8. "Balancing the balance sheet must also mean balancing nutrition-affordability with quality."
- 9. "Transformation requires teamwork; no single company can achieve it alone."
- 10. "Government should allow quick imports of affordable raw materials like Jowar."
- 11. "Continuous upgradation of innovative feed additives must be supported for sectoral growth."

Dr. P. S. Mahesh, Joint Commissioner and Director, CEAH-Bengaluru

Dr. P. S. Mahesh, Joint Commissioner and Director, CEAH-Bengaluru delivered an engaging address that blended industry insights with strong calls for image building and sectoral positioning. He urged the livestock industry to actively communicate its scale and contribution to the economy, noting that it is a sector valued at nearly ₹20 lakh crore and employing over 6 million people-far more than India's largest IT exporter. He emphasised the need to highlight such facts publicly to gain recognition and respect for the sector.

Dr. P. S. Mahesh presented detailed figures on maize, corn, and rice production, drawing attention to the growing demand-supply imbalances. He explained the ethanol production process from maize, underlined the exponential rise in ethanol output, and warned of collateral impacts on raw material availability and prices. He also highlighted the importance of DDGS and DORB in balancing feed costs, while acknowledging government measures that have stabilised supplies.

He concluded with a powerful call for collective action: launching a nationwide campaign titled "Mission Protein for Life", aimed at positioning eggs, milk, and meat as indispensable sources of nutrition. He suggested consistent investment in image-building and advertising to elevate the livestock sector's visibility and ensure its long-term sustainability.

Pointers:

- 1. "The livestock sector is a ₹20 lakh crore industry, employing 6 million people-yet it lacks recognition."
- 2. "We must start projecting ourselves as the TCS of the livestock sector to gain visibility and respect."
- 3. "Value of milk is greater than that of sugarcane, which must be highlighted in public communication."
- 4. "In 2021-22, maize output was 32-33 MMT, demand 28 MMT, and exports 3.7 MMT."
- 5. "Ethanol production from maize has grown nearly nine times, rising from 32 crore litres in 2022-23 to 485 crore litres projected in 2024-25."
- 6. "Rising maize and soybean prices, along with volatility, threaten feed cost stability."
- 7. "DDGS provides higher protein content (around 45%) but requires better quality control."
- 8. "Government intervention has secured DORB availability by restricting exports until September 2025."
- 9. "India must focus on building domestic additive manufacturing capacity to reduce dependence on imports."
- 10. "Final mantra: volume by large players, value by small players, both are essential for sector growth."
- 11. "Proposal for a campaign-Mission Protein for Life-to promote the nutritional importance of meat, milk, and eggs."

Dr. Gagan Garg (Dy. Commissioner of Trade, Department of AH&D, GOI)

Dr. Gagan Garg, Dy. Commissioner of Trade, Department of AH&D, GOI stressed the importance of balancing national priorities with farmers' welfare, noting that policy support for one group should not result in disadvantages for another. He outlined the challenges around commodities like maize, sorghum, and soybean, which fall under MSP, making import decisions complex. He also reflected on the government's interventions in sensitive areas such as DORB and rice bran, where even small export volumes disrupted feed costs, prompting restrictions. At the same time, he pointed to the growing role of Free Trade Agreements, urging careful, data-driven decisions to ensure industry stability.

He further underlined the sector's need to address quality concerns, particularly issues like aflatoxin in milk linked to feed inputs, and to better leverage ethanol by-products such as DDGS. Drawing attention to the fast-growing pet food market, he highlighted its reliance on imports due to the lack of quality local ingredients, and urged domestic production to meet global

standards. He closed by calling for strong, collective, and data-backed efforts from stakeholders to guide policy and support sustainable industry growth.

Pointers:

- 1. "Balancing the nation's balance sheet must not come at the cost of farmers' balance sheets."
- 2. "Imports of maize, sorghum, and soybean are complex under MSP; we must explore viable alternatives."
- 3. "Even 8% export of DORB around 6 lakh MT significantly impacted cattle feed prices."
- 4. "Government restrictions on DORB and rice bran exports were necessary to stabilise the feed industry."
- 5. "In FY 2024-25, India imported compound feed worth ₹6 crore and exported ₹400 crore."
- 6. "Industry must provide strong data before FTAs grant concessions on compound feed."
- 7. "Aflatoxin in milk is linked to feed quality; we need stricter monitoring and better by-product utilisation."
- 8. "DDGS and ethanol by-products should be upgraded for local use to reduce dependency on imports."
- 9. "The pet food industry is growing at 20% annually but remains dependent on imports due to poor-quality local ingredients."
- 10. "Strong, collective data is the foundation for sound policy and holistic decisions."

Mr. Jaison John, CLFMA MC Member

Addressing the challenges in plant protein sources, Mr. Jaison John, CLFMA MC Member, highlighted the inherent complexity of commodity markets, which remain beyond full control and constantly shifting. Farmers, crushers, feed millers, and integrators face daily pressure to innovate with sustainable and economically viable alternatives. India, while being the world's largest milk producer, second-largest egg producer, third-largest aqua producer, and fourth or fifth in broiler production, continues to grapple with issues of quality consistency, particularly in raw materials like DDGS and soy, often impacted by adulteration and mycotoxins. Despite achieving self-sufficiency in most raw materials over the last 50 years, except for amino acids, where dependence on China persists, the sector struggles with maintaining standards. Historical challenges, such as wheat shortages in 2016 and 2018 that forced imports from France, Russia, Australia, and even Pakistan, demonstrate how crises have driven the industry to strengthen domestic production.

Mr. Jaison John further emphasised that while opportunities exist, India remains unprepared for exports, with competitors like Brazil able to supply the Middle East more efficiently. He underlined the need for data-driven solutions, shifting from human-driven analysis to AI-driven insights, requiring patience and investment. He also referred to the Right to Protein campaign, which is creating nationwide awareness. Importantly, the relative lack of heavy government interference in animal husbandry, unlike in agriculture, was seen as a positive factor enabling growth and innovation.

Pointers:

- 1. "India is the largest milk producer, 2nd largest in eggs, 3rd in aqua, and 5th in broilers, but struggles with quality consistency in raw materials."
- 2. "DDGS and soy face issues of adulteration and mycotoxin contamination, posing major threats."
- 3. "Over the past 50 years, India has achieved self-sufficiency in most raw materials, except amino acids, where dependence on China continues."
- 4. "Wheat shortages in 2016 and 2018 led to imports, but domestic production has since stabilised."
- 5. "Export competitiveness remains weak-Brazil outperforms India in reaching Middle Eastern markets."
- 6. "Commodity challenges drive innovation, forcing the search for alternative, sustainable solutions."
- 7. "Transition from human-driven to AI-driven data analysis is shaping the sector."
- 8. "The Right to Protein campaign is gaining traction across the country."
- 9. "Limited government interference in animal husbandry is supporting healthier sector growth compared to agriculture."

Dr. N. C. Manju (Animal Nutritionist)

Dr. N. C. Manju (Animal Nutritionist) shared his international perspective on quality concerns in raw materials and the importance of standardisation. He highlighted that broiler diets can vary in soybean inclusion, with both 18% and 30% delivering comparable performance, provided proper checks and controls are in place. He emphasised that the key to managing alternative ingredients lies in defining purchase standards that align suppliers with company requirements, a practice often overlooked when it comes to aflatoxin or other toxin benchmarks. He also underlined the urgent need for feed mills to build laboratory capabilities and use them effectively, rather than relying on assumptions, especially in a market marked by volatility and raw material variability.

He further stressed that cost optimisation depends on understanding ingredient variability, relative pricing (shadow pricing), and the correct application of technologies like NIR. Without proper use, tools such as NIR become underutilised, limiting their ability to detect adulteration in ingredients like DDGS or corn distillers. By integrating purchase standards, laboratory testing, and technology-driven monitoring, he noted that the industry can significantly reduce reliance on soybeans and mitigate the impact of price crises in commodities like palm and soy.

Pointers:

- 1. "Broiler diets can include soybean at 18% or 30%, with similar performance outcomes."
- 2. "Defining purchase standards is critical-yet aflatoxin checks are often missing in purchase orders."
- 3. "Quality of DDGS and rice DDGS has improved over time, but still requires monitoring."
- 4. "The majority of feed mills lack functional laboratories or fail to apply results in real-time."
- 5. "Ingredient variability: rice DDGS protein can range from 38% to 55%; feed formulation must adjust accordingly."
- 6. "Relative pricing (shadow pricing) is essentia-DDGS can only be viable if priced proportionately to soy."
- 7. "Recent trend: soybean prices shot up in the last 15 days, while alternatives remained stable."
- 8. "Feed costs account for 75-80% of total production costs, making optimisation critical."
- 9. "Technologies like NIR are underutilised, often used only for printing, not for detecting adulteration."
- 10. "Proper monitoring and reduced dependency on soybeans can help stabilise production costs during commodity crises."

Session 1 concluded with an engaging Q & A, covering topics from the potential use of surplus wheat for ethanol production to the impact of power and fuel costs on feed profitability. Panellists discussed strategies for optimising equipment efficiency, the role of alternative raw materials, and existing government support schemes for feed additives and infrastructure. Attendees also highlighted successful micro- and cluster-based livestock models that demonstrated how small-scale operations can achieve substantial returns. These discussions set the stage for the next panel, which will delve deeper into emerging trends and opportunities across the livestock and feed value chain.

The post-lunch session commenced with a presentation on soya by **Mr. Jaison John, CLFMA MC Member.** He introduced the US Soya Bean Export Council's Power Program, which aims to educate people about the importance of adequate protein consumption for improved nutrition, health, and well-being.

The campaign, known as **Right to Protein**, has been active in India since 2019. It is a collaborative initiative involving likeminded organisations, academic professionals, and individuals to build public knowledge on diverse protein sources to achieve broader nutrition security goals. Over the years, several institutions and professionals have joined the initiative.

The **Right to Protein** campaign encompasses a range of initiatives and media properties:

- Protein Day: Launched in 2020 as a YouTube-based program to highlight the importance of achieving sufficient protein intake. The initiative uses educational videos, including presentations by teachers, to reach students and the general public.
- Soya Month: Celebrated in April to promote the consumption of soya-based foods and encourage meeting daily protein requirements.

- Indian Protein Paradox: Analyses protein consumption challenges using data, surveys, and interactions with people across 19 Indian cities to understand awareness and perceptions around protein intake.
- Soy Summit: Held in 2023, the summit focused on spreading awareness of the benefits of soy, a highly digestible plant-based protein source.
- India Food to Feed: A study providing key insights into annual protein consumption and nutrition trends.
- India Protein Score: In collaboration with Level Blind India, this initiative rates high-protein food and beverage products, helping individuals identify protein gaps in their diet.
- Soya Feed Label: A labelling initiative for feed manufacturers to indicate soy-based feed products.
- Effort Menu: A program where families, particularly mothers, create menus exclusively based on soy products.
- Right to Protein Run: A half-marathon in Nepal, conducted annually for the last four years, promoting awareness of protein consumption with over 4,000 participants.
- Marker Protein: Curated dishes focusing on high-quality protein.
- Pitch to Fork: A platform to promote startups and entrepreneurs in the protein sector, with competitions conducted in Dubai and other regions to encourage innovation.

The campaign has achieved significant visibility, including mentions at the Global Business Cycle inauguration in 2023 and active engagement on social media platforms. Additional information can be found on their website, righttoprotein.com.

He also highlighted the Excellence Centre India Chapter, started in 2023, which focuses on training early-to mid-career professionals in the feed, poultry, swine, aqua, dairy, and soya food sectors. Courses are conducted in hybrid formats and include online learning, in-person sessions, and community engagement, offering certification and access to expert networks. Recent training sessions have been conducted in Kochi and other locations, recognising top performers based on performance and community participation.

On the significance of soy, it was noted that India relies on over 5.2 lakh farmers for soybean cultivation. Soy serves as a major plant-based protein source for both humans and animals and plays a role in nitrogen fixation for soil health. It is also used in fuel and industrial products. Nutritionally, soybean contains approximately 30% protein, 19% fat, 9% carbohydrates, 4% ash, and 30% moisture, with the meal primarily used for animal feed (97%) and the remainder for human food and oil production.

Globally, soybean production has grown significantly over the last 12 years, reaching approximately 426 million metric tons, driven by demand for feed, edible oil, and fuel. In India, per capita protein consumption remains below global standards, highlighting the need for improved nutrition. India ranks as the fourth-largest feed manufacturer globally, following China, the US, and Brazil.

The current soybean meal supply in India is limited, with 13.5 million metric tons of total supply against a domestic requirement of 6.6 million metric tons and exports of 1.6 million metric tons, leaving a small surplus. This underscores the importance of efficient resource management and protein awareness initiatives.

He concluded by emphasising the link between nutrition and child growth. National surveys, including the National Family and Health Survey, indicate that India's average height remains low compared to global standards, underscoring the critical role of protein-rich diets and proper nutrition in enhancing children's health and overall well-being. In recognition of his valuable insights, Mr. K. A. Sujit Chandan, Managing Committee Member of CLFMA, felicitated him with a bouquet and a memento.

Session 2:

The Second session was titled "Outlook of Animal Agriculture for Viksit Bharat"

Moderator: Shri. Tarun Shridhar, IAS (Retd.).

Panellists:

Mr. Suresh Chitturi, Vice Chairman, All India Poultry Breeders Association Mr. Divya Kumar Gulati, Chairman, CLFMA of India

SYMPOSIUM REPORT_

Mr. Ranpal Danda, President, Poultry Federation of India

Mr. Daljit Singh, President, Progressive Dairy Farmers Association

Mr. Saji Chako, President, Society for Aquaculture Professionals (SAP)

Mr. Ravi Kumar Yallanki, President, All India Shrimp Hatchery Association

Mr. Madan Mohan Maithi, General Secretary, West Bengal Poultry Federation Association

Mr. Uday Singh Bayas, President, Indian Poultry Equipment Manufacturers Association

Mr. Naveen Pasuparthy, Chairman, Karnataka Poultry Farmers and Breeders Association



Session 2 Highlights:

Dr. Prashant Shinde, Managing Committee Member of CLFMA OF INDIA, took the stage to introduce the second session of the symposium titled "Outlook of Animal Agriculture for Viksit Bharat" He introduced the Session 2 Moderator Shri. Tarun Shridhar, IAS (Retd.) and invited him on the stage. He also introduced & invited all the distinguished panellists on the stage. All the esteemed guests were presented with mementoes.

Session 2 Moderator Shri. Tarun Sridhar, IAS (Retd.):

Moderator Shri. Tarun Sridhar, IAS (Retd.), set the stage for the panel discussion, welcoming the audience and highlighting the significance of both the topic-Animal Agriculture-and the distinguished panel. He noted that the panel encompassed all key sub-sectors of animal agriculture, including poultry, dairy, and aquaculture, aligning closely with the symposium's theme, Animal Agriculture: Way Forward. He contextualised the discussion within the vision of Viksit Bharat, emphasising the transformation of India's social and economic fabric through the four pillars of women, youth, farmers, and the poor, and underscored how animal agriculture can support this vision by shifting from primary food production to value-added, highquality products across the sector. He reminded the audience that although agriculture engages half of India's workforce, its contribution to GDP remains only 18%, highlighting the need for diversification into high-value animal agriculture to truly drive national development. Concluding his opening remarks, he invited the panellists to share their insights on how the sector can contribute to achieving the aspirations of Viksit Bharat.

Session 2 Panellists:

Mr. Divya Kumar Gulati, Chairman, CLFMA of India

Mr. Divya Kumar Gulati, Chairman, CLFMA of India, stressed that the path forward lies in uniting under a single voice, since livestock feed accounts for the majority of costs across dairy, aqua, and poultry. He highlighted that CLFMA's evolution gives it the platform to extend representation across all three sub-sectors, while also recognising new challenges that demand coordinated solutions. He concluded with brevity, reaffirming CLFMA's commitment to inclusivity and unified advocacy while leaving space for the broader panel to share their insights.

Pointers:

1. "CLFMA's origins lie in the Compound Livestock Feed Manufacturers Association, where feed makes up 70-80% of

sectoral costs, providing a natural bridge across dairy, poultry, and aquaculture."

- 2. "Historically, the association concentrated on poultry issues, driven by fluctuations in soybean meal prices and, more recently, by raw material shortages like maize, alongside the search for alternative feed ingredients."
- 3. "Emerging challenges now include tariff structures that directly impact the feed and livestock industries."
- 4. "Recognising the importance of advocacy, CLFMA has appointed a PR agency to carry the sector's message to the public and policymakers, highlighting the livestock sector's role as a major source of protein for the nation."
- 5. "Strong institutional linkages have been built with the Ministry of Animal Husbandry, a practice initiated under earlier chairmanships and consistently carried forward by successive leaders."
- 6. "The guiding principle for the future remains 'One Nation, One Voice,' ensuring the association becomes an inclusive and effective platform for the entire livestock sector."

Mr. Saji Chako, President, Society of Aquaculture Professionals (SAP)

In his remarks, Mr. Saji Chako, President of the Society of Aquaculture Professionals (SAP), underscored the importance of viewing animal agriculture as a collective ecosystem rather than fragmented sectors. He pointed out that whether it is dairy, poultry, or aquaculture, all are connected as different chapters of the same story, with a shared responsibility of ensuring protein security for the population.

He highlighted the remarkable growth of India's shrimp sector as an example of progress within animal agriculture. From just about one lakh tonnes before 2009, shrimp production has crossed the milestone of one million tonnes-a tenfold increase. However, he noted that this growth has brought the sector to a crossroads, where new challenges need to be addressed for sustainable development. Mr. Saji Chako concluded by reiterating that the future of animal agriculture lies in inclusivity and diversification. A comprehensive approach, offering consumers multiple protein choices, will ensure both nutritional security for the country and resilience for producers.

Pointers:

- 1. "Shrimp farming in India has grown exponentially since the introduction of vannamei shrimp in 2009, making India a major player in the global shrimp export market."
- 2. "Despite this growth, India continues to depend on an imported species, whereas countries like Ecuador benefit from cultivating vannamei as a native species. Mr. Chako emphasised the importance of developing India's indigenous shrimp species-such as monodon and indicus-better suited to local climatic conditions."
- 3. "Currently, around 90% of shrimp production is exported, with only 10% consumed domestically. This heavy reliance on unstable export markets exposes farmers to risks from sudden tariff changes or trade restrictions imposed by global powers."
- 4. "There is a pressing need to increase domestic consumption of shrimp. India's large and growing population provides a demographic advantage to absorb more production, reducing dependence on external markets."
- 5. "Promoting shrimp as part of a diversified protein plate is crucial. Just as families do not rely solely on milk or chicken, shrimp and aquaculture products must be positioned as everyday choices to strengthen national protein security."
- 6. "The vision aligns with creating a "national mission" for shrimp consumption and production, where aquaculture complements dairy and poultry in providing a wide variety of protein options to Indian households."

$Mr. \, Suresh\, Chitturi, Vice\, Chairman, All\, India\, Poultry\, Breeders\, Association$

Mr. Suresh Chitturi, Vice Chairman, All India Poultry Breeders Association spoke on the future consumption landscape of poultry and animal protein in India, with a vision toward 2047. He began by questioning whether India, on its path to becoming a developed nation, is prepared for the scale of demand that lies ahead. Drawing from comparative research on protein consumption in developed countries, he projected India's growth in egg and chicken consumption over the next two decades.

He noted that official figures often understate India's actual production and consumption, which are already at higher levels than reported. With massive increases in feed demand, production volumes, and consumer needs on the horizon, he stressed that the industry must address internal inefficiencies and improve coordination to unlock its full potential. He concluded that



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LIPOSOMAL VITAMIN D3 + VITAMIN K2

LIPOSOMAL CURCUMIN

LIPOSOMAL ZINC BIS GLYCINATE

LIPOSOMAL IRON

ORGANIC ACID DERIVATIVES

PROPIONATES

SODIUM PROPIONATE POWDER CALCIUM PROPIONATE POWDER AMMONIUM PROPIONATE LIQUID/POWDER AMMONIUM DIPROPIONATE LIQUID/POWDER

BUTYRATES

SODIUM BUTYRATE POWDER (98 %) SODIUM BUTYRATE COATED (30%,60% & 90 %) CALCIUM BUTYRATE POWDER (98 %) CALCIUM BUTYRATE COATED (30%,60% & 90%)

FORMATES

POTASSIUM FORMATE POWDER POTASSIUM DIFORMATE POWDER

CHELATED TRACE MINERALS

GLYCINE CHELATED TRACE MINERALS

ZINC GLYCINE SULPHATE COPPER GLYCINE SULPHATE MANGANESE GLYCINE SULPHATE FERROUS GLYCINE SULPHATE COBALT GLYCINE SULPHATE CHROMIUM GLYCINE SULPHATE CHELATED SELENIUM CHELATED IODINE

SPECIALITY VITAMIN

COATED VITAMIN C -97%

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BISGLYCINATES

ZINC BISGLYCINATE COPPER BISGLYCINATE MANGANESE BISGLYCINATE **FERROUS BISGLYCINATE**

15% GLYCINATES

ZINC GLYCINATE 15 % **COPPER GLYCINATE 15 %** MANGANESE GLYCINATE 15 % **FERROUS GLYCINATE 15 %**







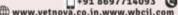








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while the poultry sector has a promising future, it will require greater collaboration, transparent data systems, and collective efforts to stabilise markets and meet the nation's growing protein requirements.

Pointers:

- 1. "Based on global comparisons, India could reach an average per capita consumption of one egg per day and 19 kg of chicken meat per year by 2047."
- 2. "This translates into a four- to five-fold rise in egg demand and a six-fold rise in chicken demand compared to present levels."
- 3. "Feed requirements will rise sharply: broiler feed could expand to 85-90 million tonnes, and layer feed to about 75 million tonnes, representing a multi-fold growth opportunity for the feed industry."
- 4. "Current statistics on poultry are inconsistent. For instance, official data counts differently across aquaculture and poultry (live vs. processed weight), leading to an underestimation of production volumes. Mr. Chitturi estimated India's chicken meat production to already be around 10 million tonnes, not the lower official figure."
- 5. "Similarly, feed demand in the dairy sector is grossly underestimated, as it often accounts only for compound feed sold in the market and not the entire cattle population."
- 6. "Volatility in poultry prices arises primarily from the lack of industry coordination. Unlike earlier years when organisations like NECC monitored and controlled supply closely, today, no reliable mechanism exists to track egg or chicken output at scale."
- 7. "Price instability often begins with localised undercutting a small reduction in one region triggers reactions across states, destabilising the entire market."
- 8. "Disconnection between farm-gate prices and consumer prices has widened in recent months, further weakening stability."
- 9. "Exports, in his view, should not be seen as a profit driver but as a strategic tool to stabilise domestic markets. Allocating just 5% of chicken production to exports could help balance supply-demand cycles within India."

Mr. Ranpal Danda, President, Poultry Federation of India

Mr. Ranpal Danda, President of the Poultry Federation of India, highlighted the underutilisation of resources in India's poultry sector, including integrators and feed millers, despite the large scale of operations. He shared practical insights from the Federation's maize plantation initiative in Haryana, where around 1,000 acres were planted, demonstrating that high yields of 10 tons per hectare are achievable with good seeds and basic guidance. He emphasised the importance of focusing on existing resources and proven practices, educating farmers about achievable yields, and conducting practical experiments on farms before pushing for GM crops. He also pointed out the disparity between India's production scale and actual productivity, illustrated by the poor condition of farmers and livestock. He cited the Progressive Dairy Farmers Association as an example of a successful coordinated effort that has brought a "Gold Revolution," showing how organised approaches can improve productivity and livelihoods. He concluded that India's poultry and dairy sectors have significant untapped potential. By focusing on practical experimentation, farmer education, optimised use of resources, and adopting proven methods, the sector can enhance productivity and improve livelihoods. While GM crops offer future opportunities, immediate gains can be realised by leveraging existing knowledge and practices.

Pointers:

- 1. "India's poultry sector resources are underutilised; integrators and feed millers are not fully leveraged."
- 2. "Misconceptions persist: 50-60% of people still think eggs have defects."
- 3. "Practical maize plantation example: \sim 1,000 acres planted in Haryana with yields around 15 quintals/acre (\sim 10 tons/hectare)."
- 4. "Emphasis on using existing resources, farmer education, and area-wise guidance before introducing GM crops."
- 5. "Farm experimentation (3-4 tests per flock) ensures real benefits and validates practices."

- 6. "GM maize has potential for 10-12 tons/hectare with proper implementation."
- "Visual evidence of low farmer productivity despite high national production highlights gaps."
- 8. "Progressive Dairy Farmers Association demonstrates how coordinated efforts can transform production and livelihoods."

Mr. Madan Mohan Maithi, General Secretary, West Bengal Poultry Federation Association

Mr. Madan Mohan Maithi, General Secretary of the West Bengal Poultry Federation highlighted the strong link between disease management and industry growth. He explained that while disease outbreaks remain a recurring threat, coordinated action by poultry federations has helped reduce mortality in affected regions. He stressed that farmers must be educated on preventive practices and that collective decision-making among integrators plays a key role in controlling placement and mitigating risks. Mr. Maithi also underlined the importance of strengthening farmer associations at the state and national levels to ensure representation, policy support, and sustainable industry growth. He concluded by emphasising that while disease remains a constant challenge, the resilience and growth of India's poultry industry lie in collective action. Stronger farmer associations, better disease management practices, and a push for self-reliance in feed production will be crucial to secure the sector's future and ensure sustainable progress.

Pointers:

- 1. "Disease management and industry development are directly interconnected."
- 2. "Short-term and long-term issues require different approaches, with federations actively pausing chicken placements in high-risk zones to contain outbreaks."
- 3. "In West Bengal, mortality rates are around 10-12% in broilers and 16-18% in layers, showing the urgency of better disease control."
- 4. "Farmer bodies and associations should unite across states, including broiler, layer, and breeder groups, to push for policies and government support."
- 5. "India's poultry sector is projected to grow by 8% annually till 2030, with production expected to more than double, demanding robust disease and feed strategies."
- 6. "Local crop production must be encouraged to reduce dependency on imports; West Bengal's maize output, for example, rose from 0.4 million MT to nearly 4 million MT through government-federation collaboration."
- "State-level poultry bodies should push for higher cultivation of poultry-related crops to ensure affordable, consistent feed supply."

Mr. Daljit Singh, President, Progressive Dairy Farmers Association

Mr. Daljit Singh, President of the Progressive Dairy Farmers Association, highlighted the transformation of Punjab's dairy sector since 1998. Starting with a 100-cow farm at a time when only 30-40 dairy farms existed in Punjab, he demonstrated that with crossbred cows, appropriate infrastructure, and modern management practices, India could match international standards. Today, Punjab has over 11,000 commercial dairy farms, many producing 10,000-12,000 litres daily, with top farms reaching 14,000 litres. Key interventions included importing high-quality semen, implementing well-ventilated sheds, total mixed ration feeding, milking systems, and introducing corn silage. The Association also promotes knowledge sharing through dairy expos and competitions, encouraging small farmers to adopt best practices. Over the years, the value of cows has increased dramatically, reflecting improved genetics, productivity, and overall sector growth. He concluded that systematic breeding, infrastructure development, and farmer education have transformed Punjab's dairy sector into a high-yield, internationally competitive industry, providing a sustainable model for productivity, profitability, and improved livelihoods.

- 1. "Punjab's dairy sector expanded from 30-40 farms in 1998 to over 11,000 commercial farms today."
- 2. "Average milk production per farm has increased from 4,000 litres to 10,000-12,000 litres daily; top farms reach 14,000 litres."

- 3. "Adoption of crossbred cows and high-quality semen from global bulls accelerated productivity."
- 4. "Infrastructure improvements included well-ventilated sheds, cow pooling systems, and total mixed ration feeding."
- 5. "Introduction of corn silage and bypass fat enhanced cow nutrition and milk output."
- 6. "Punjab dairy farms now mirror international standards, such as those in California, in terms of efficiency and management."
- 7. "Dairy expos, competitions, and knowledge sharing helped disseminate best practices across the state."
- 8. "Cow valuations increased from ₹12,000-25,000 to ₹200,000-350,000, reflecting genetic improvements and productivity gains."
- 9. "Focus on small farmers ensured inclusive growth and upliftment in the region."

Mr. Naveen Pasuparthy, Chairman of Karnataka Poultry Farmers and Breeders Association (KPFBA)

Mr. Naveen Pasuparthy, Chairman of Karnataka Poultry Farmers and Breeders Association (KPFBA), reflected on the challenges and opportunities in meat retailing in India. He described his seven-year journey in retail as an ongoing process rather than a success story, emphasising that the shift from wet markets to modern retail has been extremely slow. Rural India continues to rely on live butchery shops, while urban India is gradually moving towards processed meat due to hygiene concerns and changing consumer behaviour. He noted that although governments may not ban live animal shops because of the employment they generate, consumer preferences, especially among younger generations, are driving demand for cleaner, modern outlets. He concluded that the future of meat retail in India lies at the intersection of consumer behaviour, technology, and long-term investment. As global companies eye India's vast consumer base, building strong brands backed by modern retail practices and digital tools will be essential. The industry must treat retail as a food-tech opportunity rather than a traditional poultry business, ensuring sustainability and growth in a rapidly evolving marketplace.

Pointers:

- 1. "The transition from live butchery shops to modern retail is happening slowly but steadily, driven by consumer expectations."
- 2. "Rural India will likely remain dependent on wet markets, while urban centres show greater traction for processed meat."
- 3. "Younger consumers (below 40 years) are less willing to buy from traditional butchery shops due to hygiene and environmental concerns."
- 4. "Governments are unlikely to ban live butchery shops, given their role in providing employment."
- 5. "Retail requires long-term investment and brand-building, with a focus on consumer trust rather than immediate profitability."
- 6. "Quick-commerce and 15-minute delivery services are boosting sales of processed food and reshaping consumer expectations."
- 7. "Meat retail must be seen as a food technology enterprise, requiring strong CRM systems, customer retention strategies, and digital engagement similar to global e-commerce platforms."

Mr. Ravi Kumar Yallanki, President, All India Shrimp Hatchery Association

Mr. Ravi Kumar Yallanki, President, All India Shrimp Hatchery Association addressed the pressing question of why a smaller country like Ecuador has overtaken India in shrimp production and what lessons can be drawn. He noted that India currently exports 40-45% of its shrimp to the US, but tariffs, anti-dumping duties, and countervailing duties have created serious challenges. Since global markets are stagnant, he emphasised the urgent need to develop the domestic market, which has immense potential given India's population and demographic dividend. He pointed out that younger consumers, making up 26% of the population and influencing nearly half of national consumption, prioritise convenience and health, making shrimp an ideal fit if awareness campaigns highlight its nutritional benefits.

On the production side, he explained that India currently depends on Specific Pathogen Free (SPF) broodstock-disease-free but not tolerant. By contrast, Ecuador has adopted broodstock that are tolerant to diseases, allowing production to thrive even

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without strict biosecurity. Yalanki emphasised that India must now move towards SPF broodstock with tolerance, while also investing in the domestication of native species such as monodon and indicus, which are naturally better suited to local climatic conditions and the growing threat of disease. Linking this need to the wider challenges of climate change, he noted that existing species are already showing performance stress. He also pointed to international examples such as China, where shrimp consumption increased eightfold in step with economic growth, and Brazil, which transitioned from being entirely export-dependent to fully meeting domestic demand after facing heavy anti-dumping duties from the US. Against this backdrop, he observed that India's shrimp industry is at a critical inflexion point. To reduce its vulnerability to volatile export markets, the sector must focus on building domestic demand, raising consumer awareness, and advancing science in broodstock and species diversification. Drawing lessons from Ecuador, China, and Brazil, he argued that India can future-proof its shrimp industry by making it more resilient, consumer-driven, and aligned with the nation's rising appetite for protein. With timely and strategic action, the sector has the potential to thrive well into 2047 and beyond.

Pointers:

- 1. "India exports 40–45% of shrimp to the US but faces tariff, anti-dumping, and countervailing duties, making diversification urgent."
- 2. "Domestic consumption remains minimal; awareness campaigns are needed to highlight shrimp as a healthy, convenient protein."
- 3. "Younger consumers (26% of the population) influence 46% of national consumption and are a key demographic for shrimp demand."
- 4. "Ecuador's success is built on broodstock tolerant to diseases, unlike India's SPF-only approach that struggles with new pathogens."
- 5. "India must invest in SPF with tolerance, alongside domesticating species like monodon and indicus, which are more climate-resilient."
- 6. "Climate change has made current species less effective, reinforcing the need for species diversification."
- 7. "Rising incomes correlate with higher protein intake globally; examples include China's shrimp consumption, which rose from 3 lakh tonnes in 2003-04 to 2.5 million tonnes today."
- 8. "Brazil, once fully dependent on shrimp exports to the US, shifted to domestic consumption after an 80% anti-dumping duty, proving that local markets can stabilise the sector."
- 9. "By 2047, as India's GDP and middle class grow, protein consumption will rise, and shrimp can be positioned as a key contributor to national food security."

Mr. Uday Singh Bayas, President, Indian Poultry Equipment Manufacturers Association (IPEMA)

Mr. Uday Singh Bayas, President of IPEMA highlighted that since its inception in 2007, Poultry India has grown into a truly representative platform, now entering its 17th edition. Despite challenges over the years, the strength of associations working together has ensured resilience. Emphasising the concept of "one voice, one nation, one Expo," he noted that the presence of multiple associations and exhibitors creates a powerful collective platform. The exhibition not only showcases advanced equipment, feed, pharma, and veterinary solutions but also draws international recognition, with over 15 foreign associations participating this year to observe India's standards and practices. He stressed that Poultry India is more than an exhibition-it is a movement that unites associations, technology providers, and global stakeholders, positioning India strongly in the global poultry market. By fostering innovation, collaboration, and international engagement, the industry is better prepared to address challenges and build a sustainable future.

Pointers:

- 1. "Associations now have the opportunity to present their concerns jointly to the Government of India, strengthening advocacy efforts."
- 2. "Poultry India brings exhibitors from various associations, making it a hub for industry-wide collaboration and technology exchange."

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- 3. "The exhibition offers the latest innovations in poultry equipment, feed, pharma, and veterinary solutions, ensuring knowledge transfer across the sector."
- 4. "A new initiative, BISIFA, has already contributed ₹2.5 crore to address industry challenges, reflecting the sector's commitment to reinvest in its growth."
- 5. "Global associations are increasingly recognising India's poultry sector, with 15-17 groups from abroad participating in the upcoming edition."
- 6. "International stakeholders view India as a producer of high-quality products at sustainable prices, positioning the country as a global benchmark."

Session 2 concluded with an engaging Q & A. The discussion highlighted that while much has been said about low yields in Indian farms, the equally pressing challenge of high production costs per metric tonne or acre often goes unaddressed. Participants stressed the need to balance both yield and cost efficiency. Bihar's maize, for instance, was cited as a global success story with one of the best yields, serving as a model for replication across other regions.

Further, concerns around shortages were put into perspective. India produces nearly 330 million tonnes of coarse grains annually, while domestic consumption and wastage stand at about 300 million tonnes, leaving 30 million tonnes for export, largely in the form of rice. Thus, the issue is less about shortages and more about realignment and efficient utilisation.

Price volatility of commodities also emerged as a key challenge. Soybean meal prices in the US, for example, fluctuated sharply between 294 and 344 before falling back to 303-310 within just two months. While global producers mitigate such swings through hedging and futures exchanges, India lacks these mechanisms, leaving stakeholders exposed to prolonged uncertainty.

Speakers questioned the paradox of profitability, noting that despite maize and meal price variations last year and this year, the industry struggles to generate sustainable margins. This, they argued, calls for serious inward reflection and identification of root issues instead of recurring debates.

The session closed with an emphasis on the need for introspection, realistic assessments, and collective problem-solving. With no further questions raised from the audience, the panel discussion ended with a round of applause. In recognition of his valuable insights, Mr. Rakesh Swami, Managing Committee Member of CLFMA felicitated him with a bouquet and a memento.

Session 3:

The Third session was titled "Animal Agriculture: Health Challenges & Potential Solutions"

Moderator: Dr. P. K. Shukla, Head of Department, Mathura Veterinary College

Panellists:

Dr. M. R. Reddy, General Secretary, Association of Avian Health Professionals (AAHP)

 $Dr.\,A.S.\,Ranade, Retd.\,University\,Head\,of\,Poultry\,Science\,and\,Associate\,Dean.$

Dr. Mukesh Sharma, Dairy Consultant

Dr. Shirish Nigam, President, Indian Federation of Animal Health Companies (INFAH)



Session 3 Highlights:

Dr. Vijay Makhija, Managing Committee Member of CLFMA OF INDIA, took the stage to introduce the 3rd Session of the Symposium titled "Animal Agriculture: Health Challenges & Potential Solutions" He introduced the Session 3 Moderator Dr. P. K. Shukla, Head of Department, Mathura Veterinary College and invited him on the stage. He also introduced & invited all the distinguished panellists on the stage. All the esteemed guests were presented with bouquet and memento by CLFMA

Members.

Session 3 Moderator Dr. P. K. Shukla, Head of Department, Mathura Veterinary College

Moderator **Dr. P. K. Shukla, Head of Department, Mathura Veterinary College** set the tone for the panel discussion, emphasising that animal agriculture forms the backbone of food and nutritional security while also providing livelihood support to millions of poor and marginal farmers, contributing significantly to the national economy. Acknowledging the sector's dual reality of opportunities and challenges, he noted that diseases not only cause heavy economic losses and limit productivity but also pose serious threats to sustainability. However, he pointed out that advances in vaccines, diagnostics, artificial intelligence, and precision livestock farming are opening promising avenues to address these risks. To guide the discussion, Dr. P. K. Shukla outlined four goals: strengthening animal health systems at both farm and regional levels; adopting innovative technologies and strategies to reduce disease risk; balancing productivity with animal welfare and public health; and creating policy frameworks and partnerships to ensure a resilient future for animal agriculture. He then invited the panellists to deliberate on these themes and respond to questions drawn from stakeholder consultations.

Session 3 Panellists:

Dr. M. R. Reddy, General Secretary, Association of Avian Health Professionals, (AAHP)

Dr. M. R. Reddy, General Secretary, Association of Avian Health Professionals (AAHP) highlighted the pressing challenges of emerging and re-emerging poultry diseases in India and the critical role of vaccination and biosecurity in managing them. He noted that while vaccines exist for most diseases listed on the OIE and CDC websites, gaps remain for highly pathogenic avian influenza (HPAI), E. coli, and a few others. Advances such as hatchery-based vaccination and multiple vaccine delivery systems are improving disease prevention, but India continues to face high pathogen loads, leading to outbreaks despite vaccination efforts. He explained that avian influenza, in particular, has become a year-round threat due to mutations, recombination, and transmission through India's three major migratory bird flyways, with around 45 outbreaks already reported in 2025-the highest in recent years. The virus is no longer restricted to poultry; its spread to mammals, including cattle in the US, underscores its growing risk.

He pointed out that while India currently permits vaccines for low-pathogenic avian influenza, highly pathogenic strains are excluded due to trade implications, despite recommendations from the World Organisation for Animal Health (WOAH). Countries such as France have successfully controlled outbreaks using vaccines combined with surveillance and DIVA (Differentiating Infected from Vaccinated Animals) technology, though their trade suffered initially. Dr. M.R.Reddy further emphasised that reporting gaps, limited testing facilities (only one central lab in Bhopal), and unofficial vaccine use by farmers complicate disease management. He argued that persistent outbreaks, despite vaccine availability for diseases like infectious bronchitis, Newcastle disease, ILT, IBH, and mycoplasma, highlight flaws in strain selection, administration, dosage, and monitoring. Until vaccines for HPAI are formally approved-a process that could take two to three years-he stressed that strict biosecurity, stamping-out measures, and robust surveillance are the only effective tools. He called for active surveillance systems, public-private partnerships, better integration of regional data, and early-warning mechanisms to strengthen India's poultry health framework and prevent devastating losses to farmers and the industry. By integrating scientific advances with coordinated reporting, early warning, and industry-government collaboration, the sector can overcome recurring outbreaks and protect both productivity and livelihoods.

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Pointers:

- 1. "Vaccines exist for most poultry diseases, but gaps remain for highly pathogenic avian influenza (HPAI), E. coli, and some emerging strains."
- 2. "Hatchery vaccination and multiple vaccine delivery systems are important new technologies for wider disease protection."
- 3. "Despite vaccination, India faces high pathogen loads that trigger unexpected outbreaks."
- 4. "Avian influenza is mutating rapidly, with no seasonal restrictions, making it a year-round threat."
- 5. "India has seen around 45 outbreaks in 2025, the highest compared to previous years."
- 6. "Migratory birds (three major flyways over India) are major carriers, enabling new mutations and recombination."
- 7. "Influenza has spread to mammals, including cattle in the US, proving its expanding host range."
- 8. "Rodents, flies, and wild birds near farms also contribute to infection spread."
- 9. "India allows vaccines for low-pathogenic influenza but restricts HPAI vaccines due to trade risks and policy concerns."
- 10. "WOAH recognises the importance of avian influenza vaccines, and some European countries, like France, are already using them."
- 11. "France controlled outbreaks with vaccination plus surveillance and DIVA technology, but initially faced trade restrictions."
- 12. "Farmers in India are already using vaccines unofficially, raising questions about government policy alignment."
- 13. "Limited testing infrastructure is a barrier-currently, only one central lab in Bhopal is authorised for confirmation."
- 14. "Many outbreaks go unreported, leading to underestimation of disease burden."
- 15. "Vaccination approval, if extended to HPAI, would take 2-3 years before reaching the market."
- 16. "Persistent outbreaks despite vaccines (e.g., infectious bronchitis, Newcastle disease, ILT, IBH, mycoplasma) are linked to strain mismatch, incomplete doses, or wrong intervals."
- 17. "High pathogen load in India exacerbates disease pressure and undermines vaccination efficacy."
- 18. "Biosecurity, stamping-out policies, and surveillance remain the only effective tools until new vaccines are formally approved."
- 19. "Current surveillance in poultry is mostly passive, unlike livestock, where systems like NIVEDI in Bengaluru exist."
- 20. "A centralised, integrated poultry disease database is lacking, causing regional gaps in information."
- 21. "Informal warnings (via WhatsApp/phone) exist but must be replaced by formal early-warning systems."
- 22. "Stronger public-private partnerships are needed to ensure timely sample submissions and outbreak reporting."

Dr. A. S. Ranade, Retd. University Head of Poultry Science and Associate Dean:

Dr. A. S.Ranade, Retd. University, Head of Poultry Science and Associate Dean highlighted that while highly pathogenic avian influenza (HPAI) and the lack of vaccines dominate much of the sector's discourse, poultry health challenges extend well beyond this single issue. He pointed to immunosuppression as a critical and growing problem, leading to bacterial infections, gut disorders, and toxicity-related complications. The sector now faces not only fungal toxin risks, long familiar to poultry professionals, but also emerging challenges linked to pesticide and insecticide residues affecting bird health. He further cautioned against prematurely associating antimicrobial resistance (AMR) solely with poultry production, urging the industry to be vigilant in its response. In addition, longstanding diseases such as infectious bronchitis, nephrotic forms, inclusion body hepatitis caused by adenovirus, and Runting-Stunting Syndrome disease continue to trouble the sector. According to him, the path forward lies in combining surveillance, biosecurity, and scientific innovation with robust management practices and improved germplasm, ensuring poultry can contribute meaningfully to India's "Viksit Bharat 2047" aspirations.

Turning to climate change, he described it as the biggest challenge for poultry in the coming years. Weather patterns in Mumbai and Maharashtra have shifted, with rising temperatures and irregular rainfall now being the norm. Birds, highly sensitive to heat stress, are at severe risk once environmental temperatures rise above their body temperature of 42°C. He explained how panting leads to exhaustion, glucose depletion, hypoglycaemia, and eventual death. To mitigate these risks, environment-

controlled housing systems are becoming increasingly vital, alongside reduced stocking densities to lower stress. He concluded that only an integrated response protecting birds from toxins and pathogens, adopting climate-smart housing and stocking practices, building skilled technical capacity, and fostering producer–manufacturer partnerships, will allow the poultry sector to adapt to climate change and sustain productivity toward the 2047 vision.

Pointers:

- 1. "Low pathogenic influenza (LPI) vaccines are available in India, but high pathogenic influenza (HPI) vaccines are not available this vaccine gap is a key vulnerability."
- 2. "Persistent "old" diseases mentioned explicitly include: running disease, infectious bronchitis (notably nephrotic forms), infectious bursal disease (IBD), and infectious poultry hepatitis (IPH) caused by adenovirus."
- 3. "Immunosuppression is rising and is driving secondary problems bacterial infections, gut disorders and increased impact of fungal toxins."
- 4. "New toxicities from pesticides and insecticides are entering the food chain and contributing to immunosuppression in birds."
- 5. "He stressed that we should not label poultry as the primary driver of AMR (antimicrobial resistance); the sector must be careful about that stigma."
- 6. "He recommended toxin binders as part of the mitigation toolkit against mycotoxins and pesticide-related toxicity."
- 7. "A holistic disease-control approach is needed: toxin control + virus control + vaccine development + surveillance + biosecurity + nutrition + improved germplasm."
- 8. "He cited climate monitoring work by Dr. Natraj (recently retired, data available) that documents long-term increases in temperature and changes in rainfall and their negative effects on poultry."
- 9. "Birds' physiological limit: the average body temperature of poultry is \sim 42°C once ambient temperature approaches or exceeds this, birds cannot cope (they cannot sweat or remove feathers) and mortality risk becomes critical."
- 10. "The heat-stress pathway described: panting \rightarrow exhaustion \rightarrow blood glucose depletion \rightarrow hypoglycaemia \rightarrow death a chain reaction he used to stress urgency."
- 11. "Environment-controlled housing (climate-controlled houses) is the most practical mitigation as temperatures rise; though costly earlier, technology advances are improving affordability."
- 12. "Reducing stocking density is a recommended complementary measure to lower heat and disease stress on flocks."
- 13. "He reiterated the sector basics verbatim as a checklist: "good feed, good birds, good genetic potential, good management and good disease control."
- 14. "He urged public-private partnerships (PPP) a "win-win" model between bird producers and housing/equipment manufacturers to design affordable, maintainable environmental-control solutions."
- 15. "There are early industry efforts in Pune where manufacturers are already providing solutions and training to entrepreneurs and producers."
- 16. "Example of skills/training development: Mr. Kumar from Nasik is working on a training "school" that will teach both bird rearing and systems maintenance training structured as 50% bird-rearing / 50% housing-maintenance."
- 17. "He emphasised that these combined actions (technology + training + PPP + basics) are essential to reduce mortality, improve productivity and prepare the sector for hotter, more volatile climatic conditions."

Dr. Mukesh Sharma, (Dairy Consultant)

Dr. Mukesh Sharma (Dairy Consultant) highlighted that dairy health remains one of the most neglected areas when compared to the broader food and poultry industry. He emphasised the need to shift the role of veterinarians from merely prescribing treatments to becoming trusted advisors who can guide long-term health management. Highlighting recent challenges, he pointed to outbreaks of emerging diseases such as Lumpy Skin Disease (LSD) and Bovine Respiratory Disease Complex (BRDC), which demand urgent and focused attention. He also stressed that while government programmes, including the FMD control programme, have been initiated, they fall short in areas like vaccination storage and distribution at the primary level.

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Dr. Mukesh Sharma underlined the importance of developing robust infrastructure and called for stronger collaboration with associations to create sustainable, permanent solutions to such recurring issues.

Furthermore, he drew attention to the hard-pressing disease concerns in the dairy sector, identifying mastitis as the most widespread and problematic condition, with not a single farm in India free from its presence. He noted that farmers often treat mastitis at early stages with antibiotics, but their irrational use contributes heavily to antimicrobial resistance (AMR). Alongside mastitis, he highlighted ketosis, a metabolic disease, as another major concern for dairy productivity, along with other emerging threats facing the organised dairy industry. While farmers have adopted pellet feed, milking machines, and teat-dipping solutions, he stressed that simple practices like cleaning and sanitising water troughs remain neglected, despite their importance for herd health. He called for technological innovations such as instant water sanitising tablets, which could immediately eliminate contaminants, and emphasised the need for awareness creation through technology-driven platforms like WhatsApp and YouTube to reach farmers at scale.

Comparing dairy with poultry, Dr. Mukesh Sharma noted that poultry benefits from multiple vaccines and organised preventive strategies, while the dairy sector has only two or three vaccines available and continues to face gaps for diseases such as IVF, PVD, and clostridia infections. With the dairy sector being largely unorganised and scattered, ensuring biosecurity is a significant challenge. He also observed that indigenous (desi) cattle breeds are more resistant to mastitis, unlike high-yielding exotic breeds that are more vulnerable but produce higher milk volumes. However, he emphasised that clean milk production practices are still poorly adopted. For long-term improvement, he recommended focusing on pure breeding strategies instead of indiscriminate crossbreeding. He further underscored the role of institutions in bridging the gap between industry and farmers, especially through research, extension, and technology transfer, to strengthen disease management and improve dairy sector sustainability. Dr. Mukesh Sharma concluded that addressing dairy health challenges requires a preventive, awareness-led approach supported by innovation, biosecurity, and institutional involvement. Only then can the sector effectively tackle diseases like mastitis and ketosis, reduce AMR risks, and enhance both productivity and farmer profitability.

Pointers:

- 1. "Dairy health is often overlooked compared to food and poultry industry concerns."
- 2. "Veterinarians must move from being prescribers to serving as advisors."
- 3. "Mastitis is the most pressing dairy disease, affecting every farm and often mishandled with antibiotics, contributing to AMR."
- 4. "Ketosis is a key metabolic disorder impacting dairy productivity."
- 5. "Basic hygiene, such as cleaning water troughs, is often overlooked despite other modern practices being adopted."
- 6. "Instant water sanitising solutions could help farmers prevent infections effectively."
- 7. "Awareness programmes should leverage digital tools like WhatsApp and YouTube for wider farmer outreach."
- 8. "Unlike poultry, dairy has very few vaccines, leaving diseases like IVF, PVD, and clostridia infections unaddressed."
- 9. "The unorganised, scattered nature of dairy makes biosecurity measures difficult to enforce."
- 10. "Indigenous cattle breeds show greater resistance to mastitis, while exotic high-yielders face higher health risks."
- 11. "Clean milk production remains under-practised and requires stronger farmer education."
- 12. "Pure breeding is preferred over crossbreeding to secure long-term productivity gains."
- 13. "Institutions must take a stronger role in research, extension services, and linking industry with farmers."
- 14. "Government initiatives such as the FMD control programme exist but face execution gaps."
- 15. "Inadequate storage and handling of vaccines at the primary level remains a major challenge."
- 16. "Infrastructure development is crucial for effective disease prevention and management."
- 17. "Strengthened partnerships with associations can help build permanent solutions."

Dr. Shirish Nigam, President, Indian Federation of Animal Health Companies (INFAH)

Dr. Shirish Nigam, President, Indian Federation of Animal Health Companies (INFAH) presented a macro perspective on

building a stronger foundation for India's animal health sector, emphasising that progressive thinking is essential for achieving the vision of "Viksit Bharat." He highlighted that healthy animals are directly linked to healthy food, families, and ultimately a healthy nation. Dr. Shirish Nigam stressed the urgent need to upgrade veterinary education by redefining curricula with new topics such as One Health, precision nutrition, and the use of artificial intelligence in animal health and nutrition. Alongside education, he underlined the importance of effective extension activities that leverage India's vast mobile phone penetration to deliver knowledge in regional languages with simple visuals and practical advice for farmers. He also pointed out that data management and surveillance are critical for stronger advocacy and policymaking. Addressing scalability and profitability, Dr. Shirish Nigam emphasised innovation as the key to overcoming challenges of scarcity in a densely populated country, noting that incentivising innovators in areas like seed technology will catalyse growth and create sustainable abundance.

Further, he highlighted the transformative role of vaccines, diagnostics, and digital technologies in animal health management. AI-enabled disease prediction, precision feeding, and farm/geography-specific data models can improve productivity and policy decisions. He noted challenges such as farmers' hesitancy to share samples with government labs, affecting data reliability, and shared that INFAH's public-private approach has successfully provided authentic data for government use, including parliamentary discussions. The emphasis on diagnostics, data-driven decisions, and innovative technologies underlines the importance of evidence-based strategies to safeguard animal health and food security. He concluded that strengthening animal health in India requires a multi-pronged approach: modern education, effective extension services, innovative technologies, robust diagnostics, and reliable data for policy-making. Evidence-based strategies, combined with collaboration between the industry, government, and farmers, are essential to build a resilient, productive, and sustainable animal health ecosystem.

Pointers:

- 1. "Emphasised macro perspective: healthy animals → healthy food → healthy families → strong nation."
- 2. "Stressed need for progressive thinking to achieve "Viksit Bharat."
- 3. "Advocated modernising veterinary curricula to include:
 - One Health
 - · Precision nutrition
 - Al applications in animal health and nutrition"
- 4. "Highlighted the importance of extension services using mobile penetration for regional language communication."
- 5. "Urged collection of credible data for informed policy-making and advocacy, leveraging public-private partnerships."
- 6. "Emphasised innovation, scalability, and collaboration to address scarcity and create abundance in animal health."
- 7. "Highlighted the transformative role of vaccines, diagnostics, and digital technologies:
 - AI-enabled disease prediction models for farms/geographies
 - Precision feeding models combining veterinary expertise with digital tools
 - Data-driven decisions for farmers and policymakers"
- 8. "Noted challenges: farmers' hesitancy to share samples affects data reliability."
- 9. "INFAH's public-private partnership model successfully generated authentic data for government use and parliamentary discussions."

Session 3 concluded with a detailed Q & A addressing key concerns in poultry and livestock management, human health risks, farm practices, and policy challenges. The discussion began with questions on the potential risks to humans if poultry diseases go unreported, particularly in relation to viruses crossing the species barrier. Experts clarified that many poultry viruses, including influenza variants, are fragile and sensitive to high temperatures. During slaughter and processing, viruses are eliminated through standard treatments such as fluoridation, and India's high-temperature cooking practices further ensure that pathogens are unlikely to survive, thereby minimising risks to humans.

A significant portion of the discussion focused on kidney infections in poultry. Experts explained that recent outbreaks are

linked to three main infectious agents: infectious bronchitis (nephropathogenic strains), nephritis virus, and chicken astrovirus. While some kidney involvement may also occur with diseases such as IBH and IBD, effective vaccines exist for infectious bronchitis and astrovirus, but no vaccines are currently available for infectious nephritis. Participants emphasised the need for detailed studies, including virus isolation, characterisation, and sequencing, to determine whether current vaccines match the circulating strains and to develop effective remedies.

The session also addressed farm-level challenges, particularly silage making and feeding practices. Recommendations included the use of reliable harvesters, such as those manufactured by Jaguar or locally produced equipment from Punjab, as well as locally made silage pillars available in various capacities. Experts emphasised the use of Total Mixed Ration (TMR) feeding to maintain balanced nutrition while reducing labour requirements, particularly for sheep and goat farms where full stall feeding can be labour-intensive and costly.

Policy and industry challenges were also discussed, with participants noting that even after government approvals for practices such as LPAI vaccination, follow-up data and impact assessments are often lacking. Experts stressed that visible outcomes and consistent monitoring are necessary to guide further policy decisions. The discussion underscored the importance of biosecurity measures, effective vaccination programs, and preventive strategies to reduce antibiotic use and address antimicrobial resistance (AMR) concerns. In alignment with the One Health Mission, the sector must ensure clean and responsible practices to safeguard both animal and public health.

Overall, the session highlighted the need for collaboration between researchers, farmers, and policymakers to improve disease management, enhance farm productivity, and ensure public safety. While concerns about zoonotic transmission remain, proper biosecurity, vaccination, and food handling practices significantly mitigate risks. The dialogue reinforced the importance of continuous research, monitoring, and practical solutions such as TMR feeding and appropriate silage equipment to sustain the livestock sector and promote long-term health and productivity.

Following the session, special felicitations were held, during which Mr. Valsan Parameswaran, Secretary of the All India Poultry Association and Mr. Murali were felicitated as Special Guests by Mr. Divya Kumar Gulati, Chairman, CLFMA OF INDIA.

For more information, please refer to our website www.clfma.org



Valedictory Session:

Symposium Summation & Conclusion:

The symposium concluded with the valedictory session delivered by **Mr. Abhay Shah, Dy. Chairman of the CLFMA of India**, who offered a summation of the discussions and key takeaways from the event. The event also included the felicitation of sponsors, media, guests, and invitees.

Take Away:

Distinguished guests, respected speakers, members of CLFMA, sponsors, media partners, and friends came together in

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Hyderabad for the 58th Annual General Meeting and 66th National Symposium of CLFMA of India. Over two days, participants deliberated on the theme of critical importance: animal agriculture in India and the way forward. The symposium provided a platform to hear from eminent leaders across dairy, poultry, aquaculture, animal nutrition, and health. Their insights highlighted challenges ranging from sustainability and cost pressures to health and disease management, balancing feed and raw material costs, and ensuring competitiveness in domestic and global markets.

At the same time, the discussions underscored the tremendous opportunities ahead, whether in the dairy sector's potential to continue feeding the nation, the growth of agriculture into domestic markets, or the poultry sector's capacity to scale with innovation. A clear message emerged: animal agriculture will play a pivotal role in India's journey towards Viksit Bharat.

The inaugural session featured distinguished government representatives and industry stalwarts. The convener, Mr. Vijay Bhandare, in his press welcome address, highlighted the importance of increasing the infusion of eggs in mid-day meal programs in Telangana. Chairman Mr. Divya Kumar Gulati welcomed dignitaries and acknowledged the presence of 17 associations supporting the event. Shri. Tarun Shridhar, IAS (Retd.), in his thematic address, emphasised the need to focus on building a healthy domestic market rather than solely pushing for exports.

Several stalwarts were felicitated for their contributions: Mr. Pravin S. Lunkad received the CLFMA Lifetime Achievement Award, while Dr. K. Karthikeyan and Prof. Jyoti Palod received CLFMA awards. For the First time, CLFMA launched its Industry-Academy Association, conducting an essay competition for veterinary students, receiving over 130 entries. Winners received gold, silver, and bronze medals, cash prizes of ₹1 lakh, ₹50,000 and ₹25,000 respectively and appreciation certificates.

Guest of Honour Dr. Muthukumaraswamy B., Joint Secretary (NLM), Department of Animal Husbandry & Dairying, shared insights on the Government of India's National Livestock Mission, supporting farmers to diversify beyond regular dairy, poultry, and aquaculture species. Special Guest Shri. Sabyasachi Ghosh emphasised quality, productivity, sustainability, and the importance of R&D to enhance competitiveness. Shri. Eatala Rajendra, Member of Parliament, Government of Telangana, speaking as a Poultry farmer, appealed for government support to mitigate risks for livestock farmers. Guest of honour Sri Vakiti Srihari, Hon'ble Minister for Animal Husbandry, Dairy Development & Fisheries, Sports and Youth Services, an aqua farmer, engaged with the industry to suggest actionable measures, while Chief Guest Prof. S.P. Singh Baghel, Hon'ble Minister of State for Fisheries, Animal Husbandry & Dairying, and Minister of Panchayati Raj, Government of India, invoked the phrase 'Band kamra, Khuli baatein,' urging industry leaders and CLFMA members to engage in open and candid discussions on challenges.

Day two featured engaging sessions, including Dr. R. S. Sodi's immersive talk on the dairy sector, Dr. Girish Kolwankar's insights on poultry challenges such as high mortality rates and raw material prices, and Dr. Manoj Sharma's vision for a self-reliant Indian livestock industry. Sessions chaired by Mr. O. P. Chaudhary examined maize and soya volatility, alternative feed solutions, domestic and international supply-demand dynamics, tax policies, R&D, and regulations. Mr. Jaison John discussed the "Right to Protein" initiative, followed by a panel discussion with eight national associations, emphasising that India's livestock sector rests on four pillars: women, youth, farmers, and the poor. The final session, moderated by Dr. P. K. Shukla, addressed health challenges and potential solutions in animal agriculture.

As the symposium drew to a close, it became evident that these two days marked not an end, but a beginning-initiating renewed collaborations between policymakers, industry leaders, academia, veterinary universities, and associations; fostering innovation in sustainability, animal health, and technology adoption; and reinforcing collective responsibility to strengthen animal agriculture as a pillar of India's food and nutritional security. The symposium was declared a resounding success.

LIVESTOCK & FEED TRENDS 82



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SYMPOSIUM REPORT.



The 66th National Symposium 2025 concluded with a vote of thanks delivered by Mr. R. Ramkutty, Treasurer of CLFMA OF INDIA He acknowledged the support and efforts of the CLFMA team, noting that both the CLFMA Chairman Mr. Divya Kumar Gulati and the Hon. Secretary Mr. Nissar F. Mohammed had made his job easy by providing comprehensive summaries of the two-day proceedings. He emphasised that the event was a grand success, reflecting the contributions of speakers, panellists, and attendees.

Mr. R. Ramkutty, Treasurer of CLFMA OF INDIA expressed sincere gratitude to key contributors, including the Dr. R. S. Sodhi, President, Indian Dairy Association for their insightful session on emerging challenges and opportunities, Dr. Girish Kolwankar, Director Premium Chicks Feeds Pvt. Ltd. and Dr. Manoj Sharma, Director of Mayank Aqua Products, for his valuable participation. He further acknowledged the support of industrial stakeholders, consultants, veterinary institutions, veterinarians, and awardees for their active engagement throughout the symposium. The convener, Mr. Vijay Bhandare, was also thanked for his exceptional coordination and contribution.

Special appreciation was extended to the sponsors, whose support ensured the event's financial success, and to the 17 associations that participated, thereby strengthening industry dialogue. He also recognised the efforts of CLFMA Chairman Mr. Divya Kumar Gulati, all past chairmen and office bearers present, acknowledging their continued commitment to CLFMA of India.

Acknowledgement was given to the organisers and CLFMA Secretariat, particularly the hospitality team at the venue, as well as the executive team led by Executive Director Mr. Vinay Kumar, for their dedication and seamless coordination. Mr. R. Ramkutty also noted the crucial role of media partners in enhancing the event's visibility and brand image.

In closing, he invited all attendees to continue engaging through networking, dealer interactions, and upcoming CLFMA initiatives. The Vote of Thanks formally concluded a highly successful symposium, celebrating collaboration, knowledgesharing, and a shared commitment to advancing India's animal agriculture sector.

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Registration of Delegates



Registration of Delegates



CLFMA Executive Director Col. Vinay Kumar welcomed CLFMA Members for the 58th Annual General Meeting 2025



CLFMA OF INDIA's 58th Annual General Meeting -Office Bearers on dias



CLFMA Members at 58th Annual General Meeting



CLFMA Chairman, Mr. Divya Kumar Gulati gave a short welcome address



CLFMA Hon. Secretary Mr. Nissar F. Mohammed started AGM Proceedings and presented Minutes of the 57th AGM and CLFMA Annual Report 2025



CLFMA Deputy Chairman, Mr. Abhay Shah gave a comprehensive update on CLFMA PR activities for the betterment of Livestock Sector



CLFMA Office Bearers along with CA Rohan Dedhia



CLFMA Treasurer Mr. R. Ramkutty requested Hon. Secretary Mr. Nissar F. Mohammed, to present the audited Statement of Accounts for the year ending 31st March, 2025



Hon. Secretary Mr. Nissar F. Mohammed, to present the audited statement of accounts for the FY 2024-2025 in detail to the members present, which was also unanimously adopted by the members



Mr. R. Ramkutty announced that Mr. Rohan Dedhia, Chartered Accountant of M/s. Naveen Dedhia and Co. reappointed as CLFMA's Auditor for the FY 2025-2026



Any other matter - Past Chairman Mr. P. S. Nandakumar at 58^{th} AGM 2025



Any other matter - Chairman Mr. Divya Kunar Gulati along with the Office Bearers of CLFMA



Any other matter - Mr. Pravin Lunkad, $Past\,Chairman\,of\,CLFMA\,OF\,INDIA$



Any other matter - CLFMA Dy. Chairman Mr. Naveen Pasuparthy along with the Office Bearers of CLFMA



Mr. Ramdas Kamble, CLFMA Member during 58th Annual General Meeting 2025



Mr. Divya Kumar Gulati answering the query made by Dr. Ramdas Kamble



Vote of Thanks by CLFMA Hon. Secretary Mr. Nissar F. Mohammed



Welcome of Special Guest, Sri. Sabyasachi Ghosh, IAS, Special Chief Secretary, Government of Telangana by CLFMA Chairman Mr. Divya Kumar Gulati



Special Guest, Sri. Sabyasachi Ghosh, IAS, Special Chief Secretary, Government of Telangana & Guest of Honour Dr. Muthukumaraswamy B., Joint Secretary (NLM), Department of Animal Husbandry & Dairying, GOI.



Dr. O. P. Chaudhary (Retd. JS NLM/PC) & Shri. Tarun Shridhar, IAS (Retd.) at the inaugural $Session\, of\, 66^{th}\, National\, Symposium\, 2025$



Arrival of Chief Guest Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI.



Chairman Mr. Divya Kumar Gulati along with Chief Guest Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI



Chairman Mr. Divya Kumar Gulati along with Office Bearers welcome Chief Guest Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI



Convenor of Symposium Mr. Vijay D. Bhandare welcome Shri Eatala Rajendra, Member of Parliament, Government of Telangana



Chief Guest Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI and Dr. O. P. Chaudhary (Retd. JS NLM/PC) at the inaugural session of 66th National Symposium 2025



Special Guest, Sri. Sabyasachi Ghosh, IAS, Special Chief Secretary, Government of Telangana & Chief Guest Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI at the inaugural session of 66th National Symposium 2025



Emcee, Ms. Isha Bhalla gave a warm welcome to Special Guests, Chief Guest, Guest of Honour for the Inaugural Session of CLFMA Symposium 2025



CLFMA Chairman Mr. Divya Kumar Gulati escorted Chief Guest Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI for the the inaugural session of 66th National Symposium 2025



CLFMA Chairman Mr. Divya Kumar Gulati and Convenor of the Symposium Mr. Vijay Bhandare with the esteemed guests on the dias at the inaugural session of 66th National Symposium 2025



Auspicious lighting of the lamp by CLFMA's esteemed Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI at the inaugural session of 66th National Symposium 2025



Auspicious lighting of the lamp by Guest of Honour Sri Vakiti Srihari, Hon'ble Minister for Animal Husbandry, Dairy Development & Fisheries, Sports and Youth Services (GOT) Govt. Of Telangana at the inaugural session of 66th National Symposium 2025



Auspicious lighting of the lamp by Shri Eatala Rajendra, Member of Parliament, Government of Telangana) at the inaugural session of 66th National Symposium 2025



Auspicious lighting of the lamp by CLFMA Chairman Mr. Divya Kumar Gulati at the inaugural Session of 66th National Symposium 2025



Audience at the inaugural session of 66th National Symposium 2025



Audience at the inaugural session of 66th National Symposium 2025



CLFMA Chairman Mr. Divya Kumar Gulati felicitating Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI with Bouquet



CLFMA Chairman Mr. Divya Kumar Gulati felicitating Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI with Angavastram and Memento



The Convenor of 66th National Symposium 2025 Mr. Vijay Bhandare felicitating Guest of Honour Sri Vakiti Srihari, Hon'ble Minister for Animal Husbandry, Dairy Development & Fisheries, Sports and Youth Services Govt. of Telangana with Bouquet



The Convenor of 66th National Symposium 2025 felicitating Guest of Honour Sri Vakiti Srihari, Hon'ble Minister for Animal Husbandry, Dairy Development & Fisheries, Sports and Youth Services Govt. of Telangana with Angavastram and Memento



Mr. R. Ramkutty, CLFMA Treasurer felicitating Special Guest Sri Sabyasachi Ghosh, IAS, Special Chief Secretary, Government of Telangana with Bouquet



Mr. R. Ramkutty, CLFMA Treasurer felicitating Special Guest Sri Sabyasachi Ghosh, IAS, Special Chief Secretary, Government of Telangana with Angavastram and Memento



Mr. S. V. Bhave, CLFMA Past Chairman felicitating Shri. Eatala Rajendra, Member of Parliament, Government of Telangana with Bouquet



Mr. S. V. Bhave, CLFMA Past Chairman felicitating Shri Eatala Rajendra, Member of Parliament, Government of Telangana with Angavastram



Mr. Sumit Sureka, Dy. Chairman felicitating Dr. Muthukumaraswamy B., Joint Secretary (NLM), GOI with Bouquet



Mr. Sumit Sureka, Dy. Chairman felicitating Dr. Muthukumaraswamy B., Joint Secretary (NLM), $GOI\,with\,Angava stram\,and\,Memento$



CLFMA Immediate Past Chairman, Mr. Suresh Deora felicitating Shri. Tarun Shridhar, IAS (Retd.) with Bouquet



CLFMA Immediate Past Chairman, Mr. Suresh Deora felicitating Shri. Tarun Shridhar, IAS (Retd.) with Angavastram and Memento



CLFMA Hon. Secretary Mr. Nissar F Mohammed felicitating Shri. Mettu Saikumar, Chairman of Fisheries Federation, Telangana with Bouquet



All Dignitaries on the dias at the Inaugural Session



Key Officials at the inaugural session of 66th National Symposium, 2025



Key Officials at the inaugural session of 66th National Symposium, 2025



Chairman Address by Mr. Divya Kumar Gulati at the inaugural session of 66th National Symposium,



Thematic address by Shri. Tarun Shridhar, IAS (Retd.) at the inaugural session of 66th National Symposium, 2025



Mr. S. V. Bhave. Past Chairman of CLFMA introduced Mr. Pravin S. Lunkad, CLFMA Lifetime Achievement



Round of Applause and Standing ovation to CLFMA Lifetime Achievement Awardee Mr. Pravin S. Lunkad by CLFMA Members



Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI felicitating CLFMA Lifetime Achievement Awardee Mr. Pravin S. Lunkad with Bouquet



Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI & GOH Sri Vakiti Srihari, Hon'ble Minister for Animal Husbandry, Dairy Development & Fisheries, Sports and Youth Services Govt. of Telangana felicitating CLFMA Lifetime Achievement Awardee Mr. Pravin S. Lunkad with Angavastram and Memento



Mr. Pravin S. Lunkad, CLFMA Lifetime Achievement Awardee thanked CLFMA and spoke about his $almost\,47\,years\,journey\,in\,this\,sector$



Mr. Naveen Pasuparthy, CLFMA Dy. Chairman introduced Dr. K. Karthikeyan, CLFMA Awardee



Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI felicitating Dr. K. Karthikeyan, CLFMA Awardee with Bouquet



Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI & GOH Sri Vakiti Srihari, Hon'ble Minister for Animal Husbandry, Dairy Development & Fisheries, Sports and Youth Services Government of Telangana felicitating Dr. K. Karthikeyan, CLFMA Awardee with Angavastram and Memento



Dr. K. Karthikeyan, CLFMA Awardee extending thanks to CLFMA OF INDIA



Mr. Abhay Parnerkar, CLFMA Dy. Chairman introduced Prof. Jyoti Palod



Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI felicitating CLFMA Awardee Prof. Jyoti Palod with Bouquet



Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI felicitating CLFMA Awardee Prof. Jyoti Palod with Angavastram and Memento



CLFMA Awardee Prof. Jyoti Palod extending thanks to CLFMA OF INDIA



Dr. A. S. Ranade, Retd. University Head of Poultry Science and Associate Dean briefed on the students' program first time CLFMA launched its Industry-Academy Association.



Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI felicitating Student Dr. Pasad Shivaji Wadajkar, PhD Scholar Winner Poultry Sector with Gold Medal



Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI felicitating Student Dr. Pasad Shivaji Wadajkar, PhD Scholar Winner Poultry Sector with Certificate



Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI felicitating Student Dr. Pasad Shivaji Wadajkar, PhD Scholar Winner Poultry Sector with Cheque



Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI felicitating Student Dr. Lanje Sunita Khushal, MVsc, Winner Dairy Sector with Gold Medal



Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI felicitating Student Dr. Lanje Sunita Khushal, MVsc Winner Dairy Sector with Certificate



Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI felicitating Student Dr. Lanje Sunita Khushal, MVsc Winner Dairy Sector with Cheque



Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI felicitating Student Dr. Vishal Patil, Winner Poultry Sector with Silver Medal



Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI felicitating Student Dr. Vishal Patil, Winner Poultry Sector with Certificate



Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI felicitating Student Dr. Vishal Patil, Winner Poultry Sector with Cheque



Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI felicitating Student Dr. Vennela Banoth, MVSc, Winner Dairy Sector with Silver Medal



Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI felicitating Student Dr. Vennela Banoth, MVSc, Winner Dairy Sector with Certificate



Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI felicitating Student Dr. Vennela Banoth, MVSc, Winner Dairy Sector with Cheque



In presence of Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI, CLFMA Chairman Mr. Divya Kumar Gulati felicitating Student Dr. Kanishk Kamble, MVSc, Winner Swine Sector with Silver Medal



Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI felicitating Student Dr. Kanishk Kamble, MVSc, Winner Swine Sector with Certificate



Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI felicitating Student Dr. Kanishk Kamble, MVSc, Winner Swine Sector with Cheque



In presence of Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI Mr. Vijay Bhandare, Convenor of Symposium felicitating Student Dr. Patekar Prakash Goraksha, PhD Scholar, Winner Aqua Sector with Silver Medal



In presence of Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI, Sri Vakiti Srihari, Hon'ble Minister for Animal Husbandry, Dairy Development & Fisheries, Sports and Youth Services, Government of Telangana felicitating Dr. Ashish Tiwari, Winner Swine Sector with Bronze Medal



Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI felicitating Student Dr. Bhupika Dewangan, MVSc, Winner Aqua Sector with Bronze Medal



Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI felicitating Student Dr. Nalabale Nikhil Laxmanrao with Appreciation Certificate



Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI felicitating Student Dr. Patekar Prakash Goraksha, PhD Scholar, Winner Aqua Sector with



In presence of Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI, Sri Vakiti Srihari, Hon'ble Minister for Animal Husbandry, Dairy Development & Fisheries, Sports and Youth Services, Government of Telangana felicitating Dr. Ashish Tiwari, Winner Swine Sector with Certificate



Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI felicitating Student Dr. Bhupika Dewangan, MVSc, Winner Aqua Sector with Certificate



Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI felicitating Student Dr. Rashmi Thakare with Appreciation Certificate



Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI felicitating Student Dr. Patekar Prakash Goraksha, PhD Scholar, Winner Aqua Sector with Cheque



In presence of Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI, Sri Vakiti Srihari, Hon'ble Minister for Animal Husbandry, Dairy Development & Fisheries, Sports and Youth Services, Government of Telangana felicitating Dr. Ashish Tiwari, Winner Swine Sector with Cheque



Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI felicitating Student Dr. Bhupika Dewangan, MVSc, Winner Aqua Sector with Cheque



Guest of Honour Dr. Muthukumaraswamy B., Joint Secretary (NLM), Department of Animal Husbandry & Dairying, GOI shared insights on the Government of India's National Livestock Mission



Special Guest Shri. Sabyasachi Ghosh, IAS, Special Chief Secretary, Govt. of Telangana emphasised quality, productivity, sustainability, and the $importance\ of\ R\&D\ to\ enhance\ competitiveness.$



CLFMA Audience at the inaugural session



Shri.Eatala Rajendra, Member of Parliament, Government of Telangana, speaking as a Poultry farmer, appealed for government support to mitigate risks for livestock farmers.



Sri Vakiti Srihari, Hon'ble Minister for Animal Husbandry, Dairy Development & Fisheries, Sports and Youth Services, Govt. of Telangana delivered address by Guest of Honour at the inaugural session



Chief Guest Prof. S.P. Singh Baghel, Hon'ble Minister of State for Fisheries, Animal Husbandry & Dairying, and Minister of Panchayati Raj, Government of India delivered Chief Guest Address at the inaugural



CLFMA Audience at the Chief Guest Address



CLFMA members to engage in open and candid discussions on challenges with the dignitaries



Mr. Nissar F. Mohammed, Hon. Secretary, CLFMA of India, then delivered the vote of thanks, expressing gratitude to all participants and stakeholders



Launching of Souvenir 2025



Chief Guest, Prof. S.P. Singh Baghel, Hon'ble Minister of State for FAH&D, and Minister of Panchayati Raj, GOI - Media Interviews



 $Group\,Photo\,of\,the\,Students-All\,Awardees$



Live Performance



Mr. Divya Kumar Gulati extending thanks to all sponsors of the 66th National Symposium 2025



Mr. Divya Kumar Gulati, CLFMA Chairman & Office Bearers felicitating Godrej Agrovet Ltd. Platinum Sponsor with Memento



Mr. Divya Kumar Gulati, CLFMA Chairman & Office Bearers felicitating US Grains Council, (USGC) Platinum Sponsor with Memento



Mr. Divya Kumar Gulati, CLFMA Chairman & Office Bearers felicitating U.S. Soybean Export Council, Inc (USSEC), Platinum Sponsor with Memento



Mr. Divya Kumar Gulati, CLFMA Chairman & Office Bearers felicitating Kemin Industries South Asia Pvt. Ltd., Gold Sponsor with Memento



Mr. Divya Kumar Gulati, CLFMA Chairman & Office Bearers felicitating Shivshakti Agro India Pvt. Ltd., Gold Sponsor with Memento



Mr. Divya Kumar Gulati, CLFMA Chairman & Office Bearers felicitating Nurture Aqua Technology Pvt. Ltd., Gold Sponsor with Memento



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Mr. Divya Kumar Gulati, CLFMA Chairman & Office Bearers felicitating Huvepharma SEA (Pune) Pvt. Ltd., Silver Sponsor with Memento



Mr. Divya Kumar Gulati, CLFMA Chairman & Office Bearers felicitating West Bengal Poultry Federation with Memento



Mr. Suresh Deora, Immediate Past Chairman Chairman & Office Bearers felicitating Broiler Co-ordination Committee (BCC) with Memento



Mr. Divya Kumar Gulati, CLFMA Chairman & Office Bearers felicitating Indian Poultry Equipment Manufacturers Association (IPEMA) with Memento



Mr. Divya Kumar Gulati, CLFMA Chairman & Office Bearers felicitating Poultry Federation of India (PFI) with Memento



Mr. Divya Kumar Gulati, CLFMA Chairman & Office Bearers felicitating Telangana Poultry Breeders Association with Memento



Mr. Divya Kumar Gulati, CLFMA Chairman & Office Bearers felicitating Vets In Poultry (VIP) with Memento



Mr. Divya Kumar Gulati, CLFMA Chairman & Office Bearers felicitating World Veterinary Poultry Association (WVPA) India with Memento



Mr. R. Ramkutty, CLFMA Treasurer alongwith Mr. Divya Kumar Gulati and Mr. Nissar Mohammed felicitating Pranav Bitek Agrotech Pvt. Ltd., Silver Sponsor with Memento



Mr. Divya Kumar Gulati, CLFMA Chairman & Office Bearers felicitating Telangana Poultry Federation with Memento



Mr. Divya Kumar Gulati, CLFMA Chairman & Office Bearers felicitating Rossari Biotech Limited, Silver Sponsor with Memento



Mr. Divya Kumar Gulati, CLFMA Chairman & Office Bearers felicitating Shanthi Feeds Pvt. Ltd., Silver Sponsor with Memento



Mr. Divya Kumar Gulati, CLFMA Chairman & Office Bearers felicitating West Bengal Poultry Federation with Memento



Mr. Divya Kumar Gulati, CLFMA Chairman & Office Bearers felicitating Allanasons Pvt. Ltd., Bronze Sponsor with Memento



Mr. Divya Kumar Gulati, CLFMA Chairman & Office Bearers felicitating Coastal Exports Corporation, $Bronze\,Sponsor\,with\,Memento$



Mr. Divya Kumar Gulati, CLFMA Chairman & Office Bearers felicitating Bhavani Agrovet Pvt. Ltd., Silver Sponsor with Memento



Mr. Vijay Bhandare, Convenor of Symposium and CLFMA Chairman Mr. Divya Kumar Gulati and Office Bearers felicitating Evonik India Pvt. Ltd., Bronze Sponsor with Memento



Mr. Divya Kumar Gulati, CLFMA Chairman & Office Bearers felicitating GLOCREST Pharmaceutical Pvt. Ltd., Bronze Sponsor with Memento



Mr. Divya Kumar Gulati, CLFMA Chairman & Office Bearers felicitating Godrej Foods Limited, Bronze Sponsor with Memento



Mr. Divya Kumar Gulati, CLFMA Chairman & Office Bearers felicitating Indian Trading Bureau Pvt. Ltd., Bronze Sponsor with Memento



Mr. K. A. Sujit Chandan, MC Member, Mr. Divya Kumar Gulati, CLFMA Chairman & Office Bearers felicitating Indian Herbs Specialities Pvt.Ltd., Bronze Sponsor with Memento



Mr. Abhay Shah, Dy. Chairman, Mr. Divya Kumar Gulati, CLFMA Chairman & Office Bearers felicitating Jainex Speciality Chemical, Bronze Sponsor with Memento



Mr. Divya Kumar Gulati, CLFMA Chairman & Office Bearers felicitating Niswin Enterprises, Bronze Sponsor with Memento



Mr. Divya Kumar Gulati, CLFMA Chairman & Office Bearers felicitating Nuqo Animal Nutrition India Pvt. Ltd., Bronze Sponsor with Memento



Mr. Divya Kumar Gulati, CLFMA Chairman & Office Bearers felicitating IPJA with Memento



Mr. Divya Kumar Gulati, CLFMA Chairman & Office Bearers felicitating Himalaya Wellness Company, Silver Sponsor with Memento



Mr. Abhay Shah, Dy. Chairman, Mr. Divya Kumar Gulati, CLFMA Chairman & Office Bearers felicitating Famsun Co. Ltd., Gold Sponsor with Memento



Mr. Divya Kumar Gulati, CLFMA Chairman & Mr. Nissar F. Mohammed, Hon. Secretary felicitating Spectoms Engineering Pvt. Ltd., Bronze Sponsor with Memento



Mr. Divya Kumar Gulati, CLFMA Chairman & Office $Bearers\,felicitating\,Taj\,Hotels\,Staff\,with\,Memento$



Mr. Abhay Parnerkar, Dy. Chairman alongwith Chairman Mr. Divya Kumar Gulati and Mr.Nissar F. Mohammed, Hon. Secretary felicitating Swathi Hatcheries, Bronze Sponsor with Memento



Mr. Nissar F. Mohammed, Hon. Secretary and Mr. Abhay Parnerkar, Dy. Chairman felicitating Benison Media with Memento



Mr. Nissar F. Mohammed, Hon. Secretary and Mr. Abhay Parnerkar, Dy. Chairman felicitating Mark Media with Memento



Mr. Nissar F. Mohammed, Hon. Secretary and Mr. Abhay Parnerkar, Dy. Chairman felicitating Poultry Herald with Memento



Mr. Abhay Parnerkar, Dy. Chairman & Mr. Divya Kumar Gulati felicitating Dr. H. R. Khanna, Joint Commissioner (NLM), GOI with Memento



Mr. Divya Kumar Gulati, CLFMA Chairman, Mr. Abhay Parnerkar, Dy. Chairman & Mr. Nissar F. Mohammed, Hon. Secretary felicitating R. K. Publications (Poultry Vision) with Memento



Mr. Nissar F. Mohammed, Hon. Secretary, Mr. Divya Kumar Gulati, CLFMA Chairman, Mr. Abhay Parnerkar, Dy. Chairman felicitating S.R. Publications with Memento



Mr. Nissar F. Mohammed, Hon. Secretary, Mr. Divya Kumar Gulati, CLFMA Chairman, Mr. Abhay Parnerkar, Dy. Chairman felicitating Hybiz TV with Memento



Mr. Abhay Parnerkar, Dy. Chairman, Mr. Divya Kumar Gulati, CLFMA Chairman & Mr. Nissar F. Mohammed, Hon. Secretary felicitating Noveltech Feeds Pvt. Ltd., Silver Sponsor with Memento



Mr. Divya Kumar Gulati, Chairman and Mr. Nissar F. Mohammed, Hon. Secretary & Mr. Abhay Parnerkar, Dy. Chairman felicitating Mr. Jaydeep Mazoomdar of Real Show with Memento



Mr. Abhay Parnerkar, Dy. Chairman, Mr. Divya Kumar Gulati, Chairman and Mr. Nissar F. Mohammed, Hon. Secretary felicitating Nanda Feeds Pvt. Ltd., Gold Sponsor with Memento



Mr. Divya Kumar Gulati, Chairman and Mr. Nissar F. Mohammed, Hon. Secretary, Mr. Abhay Parnerkar, Dy. Chairman felicitating Col. Vinay Kumar. Executive Director of CLFMA OF INDIA with Memento



Mr. Nissar F. Mohammed, Hon. Secretary, Mr. Divya Kumar Gulati, Chairman and Mr. Abhay Parnerkar, Dy. Chairman felicitating Ms. Shilpa Utekar, Admin Manager of CLFMA OF INDIA with Memento



Mr. Abhay Parnerkar, Dy. Chairman, Mr. Divya Kumar Gulati, Chairman & Mr. Nissar F. Mohammed, Hon. Secretary felicitating Ms. Shraddha Kadam, Admin Officer of CLFMA OF INDIA with Memento



Mr. Nissar F. Mohammed, Hon. Secretary, Mr. Divya Kumar Gulati, Chairman and Mr. Abhay Parnerkar, Dy. Chairman felicitating Ms. Poonam Mestry, Accounts Manager of CLFMA OF INDIA with Memento



Mr. Nissar F. Mohammed, Hon. Secretary, Mr. Divya Kumar Gulati, Chairman and Mr. Abhay Parnerkar, Dy. Chairman felicitating Mr. Dinesh Ambavkar, $Office \, Assistant \, of \, CLFMA \, OF \, INDIA \, with \, Memento$



Mr. Nissar F. Mohammed, Hon. Secretary, Mr. Divya Kumar Gulati, Chairman and Mr. Abhay Parnerkar, Dy. Chairman felicitating Communicate India, PR Team with Memento



Mr. Nissar F. Mohammed, Hon. Secretary, Mr. Divya Kumar Gulati, Chairman felicitating Mr.M.K.Vyas, Hind Publication (Hind Poultry) with Memento



Mr. Divya Kumar Gulati, Chairman, Mr. Nissar F. Mohammed, Hon. Secretary & Mr. Abhay Parnerkar, Dy. Chairman felicitating Mr. B. S. Rana, Poultry Punch Publication with Memento



Mr. Nissar F. Mohammed, Hon. Secretary Mr. Abhay Parnerkar, Dy. Chairman felicitating Mr. Sashank Purohit, Archana Publishing House with Memento



 $Delegate\,Registration\,for\,Symposium\,2025$



CLFMA MC Members with Dr. R. S. Sodhi



Immediate Past Chairman Mr. Suresh Deora, with Mr. H. R. Khanna and Dr. Gagan Garg



Dr. Devender Hooda requesting Chairman Mr. Divya Kumar Gulati to felicitate Sponsors of Symposium 2025



Mr. Divya Kumar Gulati, Chairman of CLFMA felicitating team of Natural Remedies Pvt. Ltd., Gold Sponsor with Memento



Mr. Divya Kumar Gulati, Chairman of CLFMA and Nissar F. Mohammed, Hon. Secretary felicitating Cargill India Pvt. Ltd., Gold Sponsor with Memento



Mr. Nissar F. Mohammed, Hon. Secretary felicitating Alltech Biotechnology Pvt. Ltd., Bronze Sponsor with Memento



Mr. Nissar F. Mohammed, Hon. Secretary felicitating DSM Nutritional Products India Pvt. Ltd., Bronze Sponsor with Memento



Mr. Nissar F. Mohammed, Hon. Secretary felicitating Trouw Nutrition India Pvt. Ltd., Bronze Sponsor with Memento



Mr. Nissar F. Mohammed, Hon. Secretary felicitating Zhejiang NHU Co. Ltd., Bronze Sponsor with Memento



Mr. Nissar F. Mohammed, Hon. Secretary & Mr. Divya Kumar Gulati, Chairman of CLFMA felicitating Dr. R. S. Sodhi, Indian Dairy Association (IDA) with Memento



Mr. Nissar F. Mohammed, Hon. Secretary felicitating Indian Federation of Animal Health Companies (INFAH) with Memento



Mr. Divya Kumar Gulati, Chairman of CLFMA, Mr. Nissar F. Mohammed, Hon. Secretary, Mr. R. Ramkutty, Treasurer of CLFMA felicitating Mr. Naveen Pasuparthy, President of Karnataka Poultry Farmers & Breeders Association (KPFBA)



Mr. Divya Kumar Gulati, Chairman of CLFMA, Mr. Nissar F. Mohammed, Hon. Secretary, Mr. R. Ramkutty, Treasurer of CLFMA felicitating Mr. Saji Chacko, President, Society for Aquaculture Professionals (SAP)



Mr. Divya Kumar Gulati, Chairman of CLFMA, Mr. Nissar F. Mohammed, Hon. Secretary, Mr. R. Ramkutty, Treasurer of CLFMA felicitating Institution of Veterinarians of Poultry Industry (IVPI) with Memento



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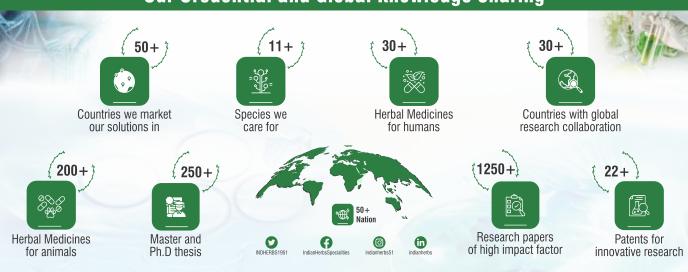
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Mr. Divya Kumar Gulati Chairman of CLFMA requested Mr. Sumit Sureka, Dy. Chairman to brief on the full day sessions.



Mr. Sumit Sureka, Dy. Chairman briefed about the CLFMA, the theme of the Symposium, the full day sessions, and highlighted CLFMA's significant role in contributing towards Viksit Bharat



Audience at Symposium 2025



Audience at Symposium 2025



Dr. Devender Hooda, CLFMA North Zone President -Introduction of the Symposium 2025 & Introducing 1st Speaker of Symposium 2025 Dr. R. S. Sodhi



1st Speaker - A dairy sector, presented by Speaker Dr. R. S. Sodhi, President of the Indian Dairy Association



1st Speaker Dr. R. S. Sodhi was felicitated by Dy. Chairman, Mr. Sumit Sureka, CLFMA of India & Mr. Divya Kumar Gulati, Chairman of CLFMA with Memento



Dr. Devender Hooda, CLFMA North Zone President Introducing 2nd Speaker of Symposium 2025 Dr. Girish Kolwankar, Director, Premium Chick Feeds Pvt. Ltd.



2nd Speaker of Symposium 2025 Dr. Girish Kolwankar, Director, Premium Chick Feeds Pvt. Ltd. focused on poultry sector



Mr. Neeraj Kumar Srivatsava, CLFMA of India former Chairman felicitating Dr. Girish Kolwankar, Director, Premium Chick Feeds Pvt. Ltd with Memento.



Dr. Devender Hooda, CLFMA North Zone President Introducing 3rd Speaker of Symposium 2025 Dr. Manoj Sharma, founder of Mayank Aquaculture Private Limited and a renowned expert in Shrimp farming



Mr. Divya Kumar Gulati Chairman of CLFMA welcoming 3rd Speaker Dr. Manoj Sharma, founder of Mayank Aquaculture Private Limited

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3rd Speaker of Symposium 2025 Dr. Manoj Sharma, founder of Mayank Aquaculture Private Limited addressed the current state and challenges of India's shrimp farming sector (Aqua Sector).



Mr. Divya Kumar Gulati, Chairman of CLFMA $felicitating\,3^{\rm rd}\,Speaker\,of\,Symposium\,2025\,Dr.Manoj$ Sharma, founder of Mayank Aquaculture Private Limited with Memento



Dr. Saikat Saha, West Zone President, CLFMA of India, introducing the first session of the symposium titled "Feed Raw Materials and Other Inputs – Balancing the Balance Sheet." & he also introduced Session I Moderator Dr. O. P. Chaudhary (Retd. JS NLM/PC) & All panelists



Session I Moderator Dr. O. P. Chaudhary (Retd. JS NLM/PC)



Session I Panelist Dr. P. S. Mahesh, Joint Commissioner and Director, CEAH-Bengaluru



Session I Panelist Mr. R. Ramkutty (Broiler Coordination Committee)



Session I Panelist Dr. R. S. Masali, Associate Vice President - Nutrition, Godrej Agrovet Ltd.



Session I Panelist Mr. Jaison John, CLFMA MC Member



Session I Panelist Dr. N. C. Manju (Animal Nutritionist)



Session I Panelist Dr. Gagan Garg (Dy. Commissioner of Trade, Department of AH&D, GOI)



Session I Panelists along with Moderator - Group



Immediate Past Chairman Mr. Suresh Deora felicitating Dr. O. P. Chaudhary (Retd. JS NLM/PC) Session I moderator with Memento



Mr. Vijay D. Bhandare, MC Member felicitating Mr. R. Ramkutty, Session I Panelist with memento



Mr. Abhay Shah, Dy. Chairman felicitating Dr. R.S.Masali, Associate Vice President - Nutrition, Godrej Agrovet Ltd. with Memento



Mr. Nissar F. Mohammed, Dy. Chairman felicitating Mr. Jaison John, CLFMA MC Member with Memento



Mr. Anushrav Gulati, Member of CLFMA International Liaisoning Committee felicitating Dr. N. C. Manju with Memento



Mr. Nissar F. Mohammed, Dy. Chairman felicitating Dr. Gagan Garg (Dy. Commissioner of Trade, Department of AH&D, GOI) with Memento



Mr. Nissar F. Mohammed, Dy. Chairman felicitating Dr. P. S. Mahesh, Joint Commissioner and Director, CEAH-Bengaluru with Memento



Session 1 Moderator Dr. O. P. Chaudhary (Retd. JS NLM/PC) introduced the topic, Feed, Raw Materials, and Inputs—Balancing the Balance Sheet



Mr. R. Ramkutty (Broiler Coordination Committee) Panelist of the Session I highlighting the importance of striking a balance between profitability, sustainability, and long-term resilience in the poultry sector



Godrej Agrovet Ltd. Panelist of the Session I sharing his perspective on the challenges and opportunities in livestock feed from a corporate nutritionist's viewpoint



Dr. P. S. Mahesh, Joint Commissioner and Director, CEAH-Bengaluru Panelist of the Session I delivering an engaging address that blended industry insights with strong calls for image building and sectoral positioning.



Dr. Gagan Garg, Dy. Commissioner of Trade, Department of AH&D, GOI, Panelist of the Session I stressed the importance of balancing national priorities with farmers' welfare



Mr. Jaison John, CLFMA MC Member, Panelist of the Session I highlighting the inherent complexity of commodity markets, which remain beyond full control and constantly shifting.



Dr. N. C. Manju (Animal Nutritionist), Panelist of the Session I shared his international perspective on quality concerns in raw materials and the $importance\, of\, standard is at ion.$



Session 1 concluded with an engaging Q & A



Session 1 concluded with an engaging Q & A



Session I Moderator and Panelists with the CLFMA of India Chairman Mr. Divya Kumar Gulati



The post-lunch session commenced with a presentation on Soya - Right to Protein initiative by USSEC by Mr. Jaison John, CLFMA MC Member



Dr. Prashant Shinde, MC Member requested Mr. K. A. Sujit Chandan to felicitate Mr. Jaison John, CLFMA MC Member for delivering a topic "Right to Protein initiative USSEC"



Mr. K. A. Sujit Chandan, Managing Committee Member of CLFMA, felicitating Mr. Jaison John, CLFMA MC Member with a bouquet and a memento



Dr. Prashant Shinde, MC Member requesting CLFMA Chairman Mr.Divya Kumar Gulati to felicitate all the Associations



Mr. Divya Kumar Gulati Chairman of CLFMA felicitating Progressive Dairy Farmers Association (PDFA) with Memento



Mr. Divya Kumar Gulati Chairman of CLFMA felicitating All India Poultry Breeders Association (AIPBA)



Mr. Divya Kumar Gulati Chairman of CLFMA felicitating Zamira Lifesciences India Pvt. Ltd., $Bronze\,Sponsor\,with\,Memento$



Mr. Divya Kumar Gulati ,Chairman of CLFMA felicitating AB Vista South Asia, Bronze Sponsor with Memento

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Dr. Prashant Shinde, MC Member, introducing the Second Session of the Symposium titled "Outlook of Animal Agriculture for Viksit Bharat" & he also introduced Session 2 Moderator Shri. Tarun Shridhar, IAS (Retd.) & All panelists



Session 2 Moderator Shri. Tarun Shridhar, IAS (Retd.)



Session 2 Panelist Mr. Suresh Chitturi, Vice Chairman, All India Poultry Breeders Association



Session 2 Panelist Mr. Divya Kumar Gulati, Chairman, **CLFMA OF INDIA**



Session 2 Panelist Mr. Ranpal Dhanda, President, Poultry Federation of India (PFI)



Session 2 Panelist Mr. Daljit Singh, President, Progressive Dairy Farmers Association (PDFA)



Session 2 Panelist Mr. Saji Chacko, President, Society for Aquaculture Professionals (SAP)



Session 2 Panelist Ravi Kumar Yellanki, President, All India Shrimp Hatchery Association



Session 2 Panelist Mr. Madan Mohan Maity, General Secretary, West Bengal Poultry Federation Association (WBPFA)



Session 2 Panelist Mr. Uday Singh Bayas, President, Indian Poultry Equipment Manufacturers Association (IPEMA)



Session 2 Panelist Mr. Naveen Pasuparthy Chairman, Karnataka Poultry Farmers and Breeders Association



Mr. Rakesh Swami, CLFMA MC Member felicitating Session 2 Moderator Shri. Tarun Shridhar, IAS (Retd.)

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Mr. S. V. Bhave, Former Chairman of CLFMA felicitating Session 2 Panelist Mr. Suresh Chitturi, Vice Chairman, All India Poultry Breeders Association



Dr. Devender Hooda felicitating Session 2 Panelist Mr. Ranpal Dhanda, President, Poultry Federation of



Mr. Divya Kumar Gulati, felicitating Session 2 Panelist Mr. Daljit Singh, President, Progressive Dairy Farmers Association (PDFA)



Mr. Sumit Sureka, Dy. Chairman felicitating Session 2 Panelist Mr. Saji Chacko, President, Society for Aquaculture Professionals (SAP)



Mr. Ashwin Rajaram, MC Member felicitating Session 2 Panelist Mr. Ravi Kumar Yellanki, President, All India Shrimp Hatchery Association



Mr. Nissar F. Mohammed, Hon. Secretary, CLFMA felicitating Session 2 Panelist Mr. Madan Mohan Maity, General Secretary, West Bengal Poultry Federation Association (WBPFA)



Mr. Anil M, MC Member of CLFMA felicitating Mr. Uday Singh Bayas, President, Indian Poultry Equipment Manufacturers Association (IPEMA)



Mr. Divya Kumar Gulati, Chairman of CLFMA felicitating Session 2 Panelist Mr. Naveen Pasuparthy Chairman, Karnataka Poultry Farmers and Breeders Association (KPFBA)



Session 2 Moderator Shri. Tarun Sridhar, IAS (Retd.), Set the stage for the panel discussion



Session 2 Panelist Mr. Divya Kumar Gulati, Chairman, CLFMA of India, stressed that the path forward lies in uniting under a single voice



Session 2 Panelist Mr. Saji Chako, President of the Society of Aquaculture Professionals (SAP), underscored the importance of viewing animal agriculture as a collective ecosystem rather than fragmented sectors.



Session 2 Panelist Mr. Suresh Chitturi, Vice Chairman, All India Poultry Breeders Association spoke on the future consumption landscape of poultry and animal protein in India, with a vision toward 2047.

CLFMA OF INDIA's 58th AGM & 66th National Symposium 2025 _____



Session 2 Panelist Mr. Daljit Singh, President of the Progressive Dairy Farmers Association, highlighted the transformation of Punjab's dairy sector since



Session 2 Panelist Mr. Naveen Pasuparthy, Chairman of Karnataka Poultry Farmers and Breeders Association (KPFBA), reflected on the challenges and opportunities in meat retailing in India.



Session 2 concluded with an engaging Q & A



Session 2 Moderator and Panelists with the CLFMA of India Chairman Mr. Divya Kumar Gulati



Dr. Vijay Makhija, Managing Committee Member of CLFMA OF INDIA, introducing the 3rd Session and he also introduced Session 3 Moderator Dr. P. K. Shukla, Head of Department, Mathura Veterinary College



Moderator of Session 3, Dr. P. K. Shukla, Head of Department, Mathura Veterinary College set the tone for the panel discussion



Session 3 Panelist Dr. M. R. Reddy, General Secretary, Association of Avian Health Professionals (AAHP)



Session 3 Panelist Dr. Mukesh Sharma (Dairy Consultant)



Session 3 Panelist Dr. A.S.Ranade, Retd. University, Head of Poultry Science and Associate Dean



Session 3 Panelist Dr. Shirish Nigam, President, Indian Federation of Animal Health Companies (INFAH)



Mr. P. S. Nandakumar, Past Chairman of CLFMA felicitating Session 3 Moderator Dr. P. K. Shukla, Head of Department, Mathura Veterinary College with Bouquet and Memento



Mr. Paramartha Roy, MC Member of CLFMA felicitating Session 3 Panelist Dr. M. R. Reddy, General Secretary, Association of Avian Health Professionals (AAHP) with Bouquet and Memento

CLFMA OF INDIA's 58th AGM & 66th National Symposium 2025 _____



Mr. Sameer Chotai, CLFMA East Zone President felicitating Dr. A.S.Ranade, Retd. University, Head of Poultry Science and Associate Dean with Bouquet and Memento



Mr. Jaison John, Chairman of CLFMA International Liaison Committee felicitating Dr. Mukesh Sharma (Dairy Consultant) with Bouquet and Memento



Dr. Prashant Shinde, CLFMA MC Member felicitating Dr. Shirish Nigam, President, Indian Federation of Animal Health Companies (INFAH)



Moderator of Session 3 Dr. P. K. Shukla, Head of Department, Mathura Veterinary College set the tone for the panel discussion, emphasising that animal agriculture forms the backbone of food and nutritional security



Panelist of Session 3 Dr. M. R. Reddy, General Secretary, Association of Avian Health Professionals (AAHP) highlighted the pressing challenges of emerging and re-emerging poultry diseases in India.



Panelist of Session 3 Dr. A.S.Ranade, Retd. University, Head of Poultry Science and Associate Dean highlighted that while highly pathogenic avian influenza (HPAI) and the lack of vaccines dominate much of the sector's discourse, poultry health challenges extend well beyond this single



Panelist of Session 3 Dr. Mukesh Sharma (Dairy Consultant) highlighted that dairy health remains one of the most neglected areas when compared to the broader food and poultry industry.



Session 3 concluded with an engaging Q & A



Session 3 Moderator and Panelists with the CLFMA of India Chairman Mr. Divya Kumar Gulati



Dr. Vijay Makhija, Managing Committee Member of CLFMA OF INDIA called Mr. Valsan Parameswaran, Secretary of All India Poultry Exporters Association on the dias



Mr. Divya Kumar Gulati felicitating Mr. Valsan Parameswaran, Secretary of All India Poultry **Exporters Association**



Mr. Divya Kumar Gulati felicitating Mr. Murali

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CLFMA OF INDIA's 58th AGM & 66th National Symposium 2025 _____



Dr. Vijay Makhija, Managing Committee Member of CLFMA OF INDIA, introducing Mr.Abhay Shah for Valedictory Session



Mr. Abhay Shah, Dy. Chairman delivering the valedictory session.



Vote of Thanks by Mr. R. Ramkutty, Treasurer of CLFMA OF INDIA



Mr. Divya Kumar Gulati felicitating Mr.Abhay Shah, Dy. Chairman



Mr. Divya Kumar Gulati felicitating Mr. Vijay $Bhandare, Convenor\, of\, the\, Symposium\, 2025$



Group photo of CLFMA office Bearers & MC Members



Group photo of CLFMA Office Bearers, MC Members alongwith CLFMA Executive Director Col. Vinay Kumar



Mr. Nissar F. Mohammed, Hon. Secretary of CLFMA felicitating Mr. B. Shiv Shankar of Poultry Line



Mr. Nissar F. Mohammed, Hon. Secretary of CLFMA felicitating Mr. M. A. Shajahan of Rizwana Publications

POULTRY ___

Innovative Management Practices in Poultry Farming to Address Climate Change, Diseases, Stress, Immunity and Economics

Dr. Prasad Shivaji Wadajkar, PhD Scholar

The global poultry industry, valued at 368.51 billion in 2023, is confronting unprecedented challenges as climate change accelerates. At the end of 2019, India's poultry industry was valued at approximately ₹1.5 lakh crore (€19.8 billion). However, in 2020 the sector suffered massive losses, with an estimated ₹17,300 crore (11.5% of its value) wiped out due to disease outbreak and reduced consumers demand because of COVID-19. In past decades India's poultry sector bleeds ₹15,000-20,000 crore annually from post-harvest losses FSSAI reports 30% meat spoilage due to broken cold chains, while APEDA data shows ₹1,200 crore/year in export rejections. NABARD findings reveal ₹5,000 crore losses just from egg and poultry wastage during transit, with 60% of small farms lacking proper storage (2023-24 Agri-reports). The year 2023 recorded as the hottest year in modern history, rising temperatures are projected to cost the sector 368.51 billion in 2023, is confronting unprecedented challenges as climate change accelerates. With 2023 recorded as the hottest year in modern history, rising temperatures are projected to cost the sector 1.5 billion annually by 2030 due to heat stress impacts on poultry health and productivity. These climate pressures coincide with devastating disease outbreaks, including the ongoing H5N1 avian influenza pandemic that has affected over 85 million birds in the U.S. alone since 2022. In response, the industry is pioneering innovative solutions that address both immediate threats and long-term sustainability. Advances in genomic selection have yielded heat-tolerant breeds demonstrating 25-40% better survival rates in extreme temperatures above 35°C. Cutting-edge AI health monitoring systems are revolutionizing disease management, reducing antibiotic use by 35% while achieving 90% detection accuracy. Simultaneously, the rapid adoption of insect-based feeds - projected to grow at 47.1% annually offers solutions to both feed costs (which constitute 60-80% of production expenses) and environmental concerns. These developments come at a critical juncture as global poultry demand is expected to grow 17% by 2030, requiring production systems that can simultaneously enhance climate resilience, maintain animal welfare and reduce the industry's 8.5% contribution to agricultural greenhouse gas emissions. This essay examines how technological and managerial innovations are transforming poultry farming into a more sustainable, efficient and climateadaptive industry capable of meeting 21st century challenges while ensuring global food security.

Transforming Poultry Farming Via

1. Genetic Advancements

The poultry industry is revolutionizing climate adaptation through cuttingedge genetics, achieving breakthrough

results in 2024. Advanced breeds like Cobb 700 broilers now show 42% higher survival in 38°C heat, while Hubbard JA757 layers maintain 85% egg production at 35°C which is 25% improvement over conventional stock. Chicken breeds which are CRISPRedited demonstrate 50% lower H5N1 infection rates and feed-efficient breeds like Aviagen's Rambler reduce feed needs by 12% without compromising growth. Microbiome engineering delivers an 18% reduction in methane emissions, directly lowering the sector's carbon footprint. Genetic innovations are transforming heat resilience, with Naked Neck (Na) and Frizzle Feather (F) genes boosting thermoregulation to improve growth performance by 15-20% in high temperatures. AI-driven genomic selection now predicts heat-tolerant traits with 90% accuracy, accelerating breed development. CRISPR-edited AMY1A genes enhance feed efficiency by 12%, while modified gut microbes cut methane output by 8-15%. Disease resistance by genetic improvement reaches new heights through the Mx gene (30% lower mortality) and TLR4 editing, combating climate-intensified pathogens. Nitrogen-reducing genetic strategies decreases emissions by 10-20%. As AI-powered prediction and synthetic biology advance, these innovations position poultry farming for sustainable growth in a warming world. The integration of precision genetics with circular economy models creates a powerful toolkit

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for maintaining food security while dramatically reducing environmental impact proving that science-led adaptation can future-proof global poultry production against climate challenges.

2. Disease Prevention & Health Management in Poultry Farming

Another major challenge facing the poultry industry is the persistent threat of disease outbreaks, which can devastate flocks and disrupt supply chains. Conventional disease management has long relied on antibiotics, but the rise of antimicrobial resistance has necessitated a shift toward alternative strategies.

• Economic Impact & Small-Scale Farmer Vulnerability

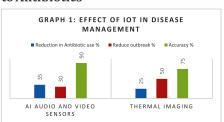
The economic impacts of these diseases are profound, with annual losses estimated at ₹25,000 crore (approximately \$3 billion USD) due to mortality, reduced productivity, treatment costs and trade restrictions. During the 2020-2021 Avian Influenza outbreak alone, the Indian poultry industry suffered losses exceeding ₹1,500 crore within three months. Small-scale farmers, who constitute about 80% of India's poultry producers, are particularly vulnerable to these economic shocks, often lacking adequate resources for biosecurity measures and veterinary care.

• Cutting-Edge Vaccines & AI-Driven Disease Detection

One promising development is the use of nano-vaccines, Virus-like particles (VLPs), Polymeric nanoparticles (Alginate, chitosan, etc.), Lipid nanoparticles (LNPs), Exosomes, including mRNA-based formulations, which offer stronger and more durable immune protection compared to traditional vaccines. These cutting-edge solutions are being complemented by smart farming

technologies that leverage artificial intelligence to detect early signs of illness, thermal imaging that identifies fevered birds before 24-25 hrs of visible detection of disease. Thermal imaging Reduces outbreak severity by 30-50%, reduce antibiotic use by 25% and improves flock welfare by targeting only affected birds. For instance, AIpowered audio sensors can analyze changes in vocalizations to identify distressed or sick birds before visible symptoms appear. The Analyzation of vocalizations (coughing, sneezing, distress calls) to identify respiratory illnesses 24-72 hours before clinical signs appear, with 85-90% accuracy. It reduces mortality disease birds mortality by 20-30%, cuts antibiotic use by 35% and enhances flock welfare through real-time, non-invasive monitoring (Graph 1).

• Gut Health & Natural Alternatives to Antibiotics



Additionally, advancements in gut health research have highlighted the importance of microbiome management in disease prevention. Feed additives such as prebiotics, postbiotics and phytogenic compounds are increasingly being used to enhance intestinal health and strengthen natural immunity. ICAR 2024 data shows MOS supplements reduce disease treatment costs by ₹9.50 per bird, while butyrate additives improve profits by ₹18 per broiler (IVRI trials). The phytogenics market is booming at 28% CAGR, yet 85% of small farmers miss out on these benefits (NABARD 2024). These innovations could save the industry ₹2,800 crore annually in preventable losses while cutting

antibiotic use by 40% (FSSAI projections).

3. <u>Case Study</u>: FAO's Educational Program & Food Safety Improvements

Bridging gut health innovations with food safety has proven transformative, as shown by the FAO's program in India, which reached 2.8 million consumers across 320 districts. Educational efforts led to a 43% drop in foodborne illnesses, with handwashing rates rising from 54% to 89% and safe poultry cooking with 74°C from 38% to 76%. The combination of these behavioral changes with poultry health advancements such as robotic automation and gut-health additives like MOS and butyrate creates a double barrier against contamination. Integrating these approaches with phytogenic feed supplements, which reduce antibiotic use by 40%, offers a comprehensive farm-to-fork safety solution. Prevention is far more cost effective than treatment; according to FSSAI, investing in education, technology, and gut health could save India's poultry sector over ₹3,500 crore annually by reducing losses and medical costs. For implementation guidance, a "Safe Poultry Value Chain" blueprint is available.

4. Stress Reduction & Welfare Enhancement in Poultry Farming by IOTs

Modern poultry farming is revolutionizing animal welfare through science backed stress reduction strategies that boost both productivity and ethical standards. Chronic stress from overcrowding or poor ventilation can suppress immunity and increase mortality by up to 15%, but innovative solutions are changing the game. Farms now implement enriched housing systems with RFID-tracked free-range access, reducing aggressive behaviors by 40%

POULTRY_

while improving space utilization. Pioneering blue light therapy calms broilers, enhancing growth rates by 8-12%, while in-ovo nutrient injections strengthen chicks' immunity before hatching, cutting neonatal mortality by 25%. These welfare-focused interventions deliver measurable business benefits: early adopters report 15% better feed conversion, 30% fewer antibiotics used and 20% higher product quality premiums (2024 Global Animal Partnership data). Simultaneously, climate-smart housing combats heat stress a \$3 billion annual threat. Advanced systems combine evaporative cooling pads (5-10°C temperature reduction) with AI-driven ventilation, slashing heat-related deaths by 30%. In Brazil and India, reflective roofing and cross-ventilation designs help broilers withstand 35°C or more temperatures with 25-40% better survival rates. Solar-powered systems cut energy costs by 35% while maintaining optimal conditions for 5-15% higher egg production. Emerging technologies like phasechange cooling materials and geothermal systems promise further breakthroughs, potentially saving the industry ₹19,205 crore (\$2.3 billion) yearly by 2030 (FAO 2024 projections). This dual focus on welfare and climate resilience proves that ethical farming drives profitability. As consumer demand for humane products grows (up 42% since 2020), these innovations position poultry producers for sustainable success in a warming world.

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5. Economic Sustainability & Feed Innovation in Poultry Production

Now a days economic sustainability remains a central concern in poultry farming particularly as feed costs which continue to rise as insufficient supply and profit margins get shrunken.

• The Rising Cost of Feed & Alternative Solutions

In poultry production, feed cost is approximately 60% to 80% of the total cost. In India, soybean meal forms 25-30% of broiler and 20-25% of layer feed, with annual consumption of 5-6 million metric ton (30-35% of India's total sovbean production) in poultry feed. Despite imports of 1.5-2 million metric ton, out of this 10-15% gets wasted due to mycotoxins, adding bentonite as mycotoxin binder of ₹150-200/ton and mitigation costs while alternatives like insect meal gain traction. Technology like Precision feeding is revolutionizing the way poultry diets are managed, with AIdriven smart feeders which adjust rations in real time based on individual bird needs. This not only minimizes waste cutting feed costs by 10 to 15 percent but also ensures optimal nutrient utilization for better growth efficiency. At the same time, the search for affordable and sustainable protein sources has led to the exploration of alternative feeds such as insect meal, single-cell proteins and algae.

• Insect-Based Feeds: A Sustainable Alternative

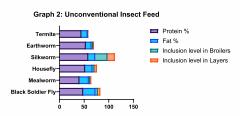
Black soldier fly, mealworm, housefly,



cricket/Grasshopper/Locust (Orthoptera), silkworm and earthworm are the commonly used insect meals in broiler and laying hen diets as unconventional feed. Black soldier fly larvae are rich in protein (35% to 61%) and can be produced using organic waste streams, creating a closed-loop system that reduces reliance on expensive conventional feeds like soybean meal. BSF larvae reduces manure mass by 50% and total nitrogen concentration by 62%. Mealworm (Tenebrio molitor) Meal is a sustainable, nutrient-rich alternative to conventional poultry feed, offering 27-54% crude protein and 4-34% fat. Studies demonstrate its benefits: inclusion at 2.5-5% improves weight gain and gut health by reducing harmful bacteria like E. coli, while 4-10% enhances growth performance and feed efficiency. Higher levels (10-15%) may alter gut microbiota but can improve meat quality by increasing beneficial fatty acids like oleic acid. Additionally, 0.4% mealworm meal boosts immunity in disease-challenged birds, reducing mortality. Housefly (Musca domestica) Meal provides 40-64% protein and 2.5-28% fat, with an amino acid profile similar to fishmeal. At 4-10% inclusion, it enhances growth, feed conversion ratio (FCR) and meat quality (tenderness, juiciness). Higher levels (20-60%) can fully or partially replace fishmeal without negative effects. Broilers fed 5-20% housefly meal show improved carcass yield, flavor and water retention in meat. Live fly larvae also benefit free-range hens by increasing egg production and hatchability. Where the Silkworm meal (45-72% protein, 2.5-26% fat) increases the poultry growth and meat quality at rate of 25-50% inclusion, while improve by 6-8% egg production. Earthworm meal (41-66% protein) improves immunity and gut health at 3-5% inclusion. Termite

POULTRY_

meal (42-47% protein) provides digestive enzymes and small amounts of bee products (0.025-0.1%) enhance egg and meat quality (Graph 2). These sustainable insect-based feeds offer nutritious alternatives to conventional protein sources in poultry diets. Similarly, yeast and algae-based proteins are being incorporated into poultry diets as cost-effective and environmentally friendly alternatives. These innovations are part of a broader shift toward circular economy models, where waste products are repurposed into valuable inputs. Some farms are now integrating insect farming directly into their operations, using poultry manure to cultivate black soldier fly larvae, which are then fed back to the birds as a high-protein supplement. This not only reduces waste disposal costs but also creates a self-sustaining nutrient cycle that enhances both economic and environmental sustainability.



• Circular Economy Solutions

In circular economy solutions are transforming poultry waste into valuable resources at unprecedented scale. Modern anaerobic digesters now convert one ton of poultry manure into 120 kWh of clean electricity and 450 kg of organic fertilizer, with India's 6,000 digesters alone offsetting 2.1 million tons of CO₂ annually. The insect protein revolution is accelerating, with black soldier fly farms globally processing 1.2 million tons of poultry waste each year into high-protein feed that's 62% cleaner than traditional composting. Major players like Tyson Foods Ltd. are investing heavily, with their Arkansas facility producing 5,000 tons of sustainable insect meal annually. Water recycling has reached new heights too AI-optimized systems in Europe achieve 35% water savings, while innovative partnerships like Nestlé-Purdue recover 90% of poultry wastewater for crop irrigation. The climate impact is quantifiable and growing: heat-resistant breeds now reduce emissions by 8.2 kg CO₂ per bird, manure biogas systems prevent 4.3 million tons of CO₂ annually and insect feed cuts 1.7 kg CO2 per kg of feed produced. With poultry contributing 8.7% of livestock emissions globally, these solutions are proving critical. Looking ahead, the EU aims for 50% of poultry farms to adopt closed-loop systems by 2025, while the USDA's \$280 million (₹2,338 crore) digester grant program is bringing these technologies to mid-sized farms. As CRISPR-developed welfare traits like featherless heat-tolerant chickens approach commercialization by 2026, the poultry sector is demonstrating how science and sustainability can work together to future-proof food production against climate challenges.

Economic Sustainability & Feed Innovation in Poultry Production Hma-a days economic sustainability remains central concern in profit margnins shrinking profit margins shrinking The Rising Cost of Feed & Alternative Solutions Insect-Based Feeds: A Sustainable Alternative Solutions Insect-Based Feeds: A Sustainable Alternative Solutions Actives and School Conganic waste Circular Economy Solutions Anaerobic Digester Water recycling Nutriett cy.le

6. The Future of Poultry Farming: Integration & Accessibility

India's poultry sector must urgently adopt innovative practices to combat climate change while meeting growing protein demand. Rising temperatures and water scarcity threaten productivity, making climate-resilient solutions essential. Precision farming technologies like IoT sensors and AIpowered disease detection systems can help smallholders optimize conditions and reduce losses. Affordable innovations such as solar-powered cooling systems and modular coops will improve adaptability to extreme weather. Sustainable feed alternatives present a major opportunity. Insectbased proteins and agricultural byproducts can replace imported soy, lowering costs and emissions. Circular economy models that convert poultry waste into biogas or biochar offer additional income while reducing environmental impact. Breeding programs are developing heatresistant indigenous varieties like Kadaknath, combined with geneediting research for disease resistant strains. Renewable energy integration, particularly solar-powered farms, can reduce reliance on unstable grid electricity. Digital platforms are enhancing market access for small farmers through blockchain-enabled supply chains and FPO networks. However, challenges like high initial costs and limited awareness persist. Government support through subsidies, training programs and public-private partnerships will be crucial for scaling these solutions. By combining smart technologies, sustainable feeds and resilient breeds, India can build a poultry sector that withstands climate pressures while ensuring food security and farmer livelihoods. The transition to climatesmart poultry farming is not just necessary it's an opportunity for India



to lead in sustainable agriculture innovation.



7. Conclusion

Ultimately, the poultry industry's ability to adapt to the challenges of climate change, disease and economic pressures will determine its long-term viability. The poultry industry, facing climate-induced losses of ₹12,540 crores (\$1.5 billion) annually by 2030, is transforming through innovation. Heat resistant CRISPR-edited breeds (42% higher survival), AI disease detection (90% accuracy) and insect-based feeds (47% annual growth) are revolutionizing sustainability. Circular economy models convert waste into biogas and fertilizer, while solar-

powered farms cut emissions. With global demand rising 17% by 2030, these advancements coupled with government support and digital integration are critical for climateresilient, ethical poultry production that ensures food security without compromising environmental goals.

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Strategies to increase Dry Matter Intake (DMI) in lactating cows along with latest relevant data.

Dr. Lanje Sunita Khushal, MVSc

Introduction

Dry Matter Intake (DMI) is a cornerstone of dairy cow productivity, health and reproductive performance in lactating dairy cows. DMI refers to the amount of feed consumed by cows excluding water content, and it directly influences the energy and nutrient supply necessary for maintenance, lactation, and physiological functions. In modern dairy farming, maximizing DMI is a central goal, especially during early lactation when cows face a negative energy balance due to the demands of high milk output.

The regulation of dry matter intake (DMI) in dairy cattle involves a dynamic interplay between physiological needs and dietary constraints. DMI is governed by both stimulatory signals (energy demands, sensory cues, social interactions, circadian rhythms and habitual patterns) and inhibitory signals (rumen distension, osmotic pressure, hormonal influences, and tissue-level nutrient sensing). These signals are integrated by the central nervous system to modulate feeding behaviour.

During lactation, DMI is primarily driven by the energy required for milk synthesis, body maintenance, and reserve replenishment. However, dietary composition and physiological state critically influence intake capacity. Forages, essential for rumen health, slow digestion due to their fiber content, which can physically limit intake by prolonging gut fill.

In the postpartum period, cows experience negative energy balance as energy demands outpace intake. During this phase, neither rumen distension nor dietary energy density can be fully adjusted to resolve the deficit. As milk production peaks, physical fill from undigested residues becomes a dominant intake-limiting factor. Conversely, as lactation progresses and milk yield declines, metabolic signals related to nutrient availability (e.g., glucose or fatty acids) gain prominence in regulating DM.

This essay explores evidence-based strategies to increase DMI in lactating cows, supported by the latest research findings, with a focus on ration formulation, forage quality, feed management, environmental control, and nutritional supplements.

Factors Affecting Dry Matter Intake (DMI) in Lactating Cows

Numerous elements influence dry matter intake (DMI), encompassing forage nutritional value, dietary nutrient composition, feeding techniques, feed palatability, moisture levels, environmental pressures, physical infrastructure, and overall management strategies.

1. Animal-Specific Factors

Milk Yield and Stage of Lactation

• Early Lactation: Cows in early lactation often experience a negative energy balance because their energy demands for milk production exceed their intake

capacity. To cope, they mobilize body fat and protein reserves, but persistent deficits can lead to metabolic disorders such as ketosis and fatty liver disease.

- Peak Lactation: As milk yield peaks, the physical fill from undigested fiber in the rumen becomes the primary limiting factor for intake. High-producing cows (>40 kg milk/day) require diets with rapidly digestible forages to avoid rumen distension and maximize nutrient intake.
- Late Lactation: As milk production declines, metabolic signals—such as glucose and fatty acid availability—become more influential in regulating DMI.

Body Weight and Health

- Body Weight: Larger cows have a greater absolute DMI, but intake per unit of body weight often decreases as cows get heavier. For example, there is typically a 1.5 kg DMI difference per 100 kg body weight.
- **Health Status:** Health problems such as lameness, mastitis, or metabolic disorders can reduce DMI by 10–20%. Pain, inflammation, and fever suppress appetite and disrupt normal feeding patterns.

2. Nutritional Factors Forage Quality

Superior-quality forages promote greater dry matter intake (DMI) compared to lower-quality



alternatives, primarily because of reduced fiber levels and faster, more complete digestion. Conversely, poorer-quality forages digest more slowly and persist longer in the rumen, restricting its capacity. Supplementing with concentrates can help offset limitations caused by inferior forage quality.

- NDF Digestibility: Forages with in vitro NDF digestibility (IVNDFD)>55% enhance rumen clearance and DMI. Low-digestibility forages slow passage rates, limiting intake.
- **Fiber Content:** Diets with >25% forage NDF restrict DMI in early lactation. For corn silage, IVNDFD is a better predictor of intake than NDF content.
- Particle Size: Forage particles ≥1 inch stimulate rumination but excessive length (>2.6 cm) can increase fill and reduce intake.

Diet Composition

- Energy Density: High-starch diets (>30% of DM) risk acidosis, while balanced non- fiber carbohydrates (NFC) (35–42% of DM) support steady fermentation.
- **Protein:** Crude protein (CP) should be 15–19% of DM. Excessive rumen- undegradable protein (>35% of CP) limits microbial growth and diet digestibility.
- Fat Content: Long-chain fatty acids (LCFA) >5% of DM in early lactation depress DMI by satiating energy receptors.

3. Environmental and Management Factors

Heat Stress

Rising temperatures elevate cows' maintenance energy demands as they expend more energy to dissipate body heat. To sustain milk production while

meeting these heightened requirements, increased dry matter intake (DMI) would be necessary. However, higher temperatures and humidity levels reduce feed consumption, as cows prioritize water intake and seek cooler environments to minimize heat generation and regulate body temperature.

• **Impact:** High temperatures and humidity reduce DMI by 6–16% at temperatures above 25°C. Cows eat less to minimize metabolic heat production and prioritize water intake.

Feeding Practices

- Total Mixed Rations (TMR): TMRs improve intake consistency compared to component feeding.
- Feed Availability: Empty bunks for more than 2–3 hours per day reduce DMI. Providing at least 24 inches of bunk space per cow minimizes competition and stress.

4. Physiological and Metabolic Regulation

Rumen Function

- **Fill Effects:** High-fiber diets (>28% NDF) prolong rumen retention, reducing intake capacity.
- Acidosis Risk: Rapidly fermentable grains (e.g., barley) lower rumen pH, suppressing intake.

Hormonal and Metabolic Signals

• Insulin resistance: When a cow is "insulin resistant," it means that the cells don't respond well to insulin, and more insulin is required to achieve the same effect. Insulin resistance is often associated with metabolic disorders and can negatively impact DMI. By improving insulin sensitivity, the risk of these disorders decreases, which in turn supports better DMI.

• **Leptin and Ghrelin:** These hormones, related to body fat reserves and hunger, modulate intake during energy deficits.

Strategies to increase Dry Matter Intake (DMI)

1. Nutritional Strategies to Enhance DMI

1.1 Optimizing Ration Energy Density and Fibre Content

One of the most effective ways to increase DMI is through careful ration formulation that balances energy density and fiber content. Energy density influences satiety signals, while fiber affects rumen health and passage rate.

- Neutral Detergent Fiber (NDF): Maintaining NDF at about 28% of dry matter is optimal. NDF is crucial for rumen function because it stimulates chewing and saliva production, which buffers rumen pH. However, excessive NDF (>35%) can limit intake due to rumen fill.
- Acid Detergent Fiber (ADF): ADF levels around 19% are recommended to ensure digestibility without compromising rumen function.
- Energy Density: Increasing energy density by adding fats or highly digestible carbohydrates can increase energy intake without reducing DMI. However, too high starch levels (>30% of diet dry matter) can cause rumen acidosis and reduce intake.

Scientific Insight: According to NRC (2021) and recent studies, diets with balanced fiber and energy promote higher DMI by preventing rumen disorders and improving palatability. A study by Smith et al. (2023) demonstrated that cows fed diets with 28% NDF and 1.65 Mcal/kg net energy for lactation consumed 8% more dry



matter than those on higher fiber, lowenergy diets.

- 1.2 Protein and Carbohydrate Synchrony
 - Crude Protein (CP): Diets containing 15-17% CP support microbial protein synthesis and cow metabolism without excess nitrogen excretion.
 - Non-Fiber Carbohydrates (NFC): NFCs, such as sugars and starches, provide fermentable energy. Balancing NFC with fiber prevents rumen pH drops and supports steady fermentation.

Latest Data: A meta-analysis (Jones et al., 2024) found that synchronizing carbohydrate and protein availability in the rumen increased DMI by 5–7%, improving milk yield and feed efficiency.

- 2. Forage Quality and Its Impact on DMI
- 2.1 Importance of High-Quality Forages

Forages form the bulk of the diet and largely determine intake capacity. High-quality forages with high digestibility and palatability encourage greater DMI.

- Legume-Grass Silages: Recent research highlights the benefits of grass-clover (GC) silage over perennial ryegrass (GO) silage. GC silage contains higher digestible organic matter, leading to increased intake and milk production.
- Particle Size: Forage particle size affects rumination and rumen health. Particles ≥2.6 cm stimulate chewing and saliva production, which buffer rumen pH and promote intake.

Recent Findings: A 2023 study by the University of Wageningen showed that cows fed GC silage had 6–12% higher DMI and reduced methane emissions

 $(200-254g\ CH_4/day)$ compared to those fed GO silage. This dual benefit supports both productivity and environmental sustainability.

- 2.2 Balancing Fiber Digestibility and Intake
 - Forages with NDF digestibility above 55% increase passage rate and energy availability, encouraging higher DMI.
 - Conversely, low digestibility fiber (>55% NDF but low digestibility) slows passage rate and reduces intake.
- 3.Feed Presentation and Feeding Management
- 3.1 Feed Accessibility and Frequency

Cows are social animals with hierarchical feeding behaviors. Ensuring adequate feed availability and minimizing competition are essential.

- Feed Bunk Space: Providing at least 24 inches (60 cm) of bunk space per cow reduces competition and stress, allowing more cows to eat simultaneously.
- Feed Push-Ups: Regular feed pushups every 2–3 hours keep fresh feed within reach, stimulating feeding behavior and increasing DMI by up to 10%.
- 3.2 Gradual Dietary Transitions

Abrupt changes in diet composition, especially increasing concentrate levels, can disrupt rumen microbiota, leading to acidosis and reduced intake.

- Gradual increases of 0.5-0.7 kg concentrate per day over 10-14 days allow rumen microbes to adapt.
- Transition diets with intermediate fiber and starch levels support steady intake.

Research Update: A 2024 trial by Cornell University found that cows

transitioned gradually to high-energy diets maintained 15% higher DMI compared to those with abrupt changes.

- 4. Environmental and Physiological Factors Affecting DMI
- 4.1 Heat Stress and Thermal Comfort

Heat stress is a major limiting factor for DMI, especially in tropical and subtropical regions.

- When ambient temperatures exceed 25°C with high humidity, cows reduce feed intake by up to 20% to lower metabolic heat production.
- Heat stress also shifts metabolism towards maintenance rather than production.

Mitigation Strategies:

- Cooling Systems: Fans, sprinklers, and misters in feeding and resting areas reduce heat load.
- Shade and Ventilation: Providing shade and ensuring airflow in barns improve thermal comfort.

Latest Data: A 2023 study in Florida showed that cows with access to fans and sprinklers maintained DMI close to thermoneutral levels, increasing milk yield by 3 kg/day compared to noncooled cows.

- 4.2 Body Condition and Health Status
 - Over-conditioned cows (body condition score >3.5) pre-partum tend to have lower DMI post-calving due to metabolic disorders.
 - Monitoring health and early detection of diseases like mastitis and ketosis is critical to maintain intake.
- 5. Nutritional Supplements to Enhance DMI
- 5.1 Chromium Supplementation

Chromium is an essential trace mineral



that enhances insulin sensitivity and glucose metabolism.

- A 2023 meta-analysis (Wang et al.) reported that chromium supplementation increased DMI by 0.77 kg/day and milk yield by 2.2 kg/day in early lactation cows.
- Chromium improves energy utilization and reduces stress, indirectly stimulating appetite.

5.2 Yeast and Probiotics

- Live yeast and yeast culture supplements stabilize rumen pH, enhance fiber digestion, and increase feed intake.
- Probiotics improve gut health and nutrient absorption.

Research Evidence: A Jones et al. 2004 study found that cows supplemented with *Saccharomyces cerevisiae* increased DMI by 5% and milk fat percentage by 0.2%.

- 5.3 Methane-Reducing Feed Additives
 - Additives such as 3-nitrooxypropanol (3-NOP) reduce methane emissions and improve feed efficiency.
 - •By improving rumen fermentation efficiency, these additives can indirectly support higher DMI.
- 6. Latest Research and Emerging Trends
- 6.1 Pre-Partum Nutrition and DMI

Recent studies emphasize the importance of pre-partum nutrition in setting the stage for post- partum intake.

- Feeding high-quality GC silage prepartum increases DMI after calving and reduces metabolic disorders.
- Maintaining DMI at 3.5–4% of body weight pre-partum improves energy balance postpartum.

6.2 Seasonal Feed Management

- In pasture-based systems, supplementing silage during low grass availability periods (spring and autumn) maintains consistent DMI
- Strategic supplementation reduces intake fluctuations and supports stable milk production.
- 6.3 Precision Feeding and Monitoring Technologies
 - Use of automated feed intake monitoring systems enables real-time DMI tracking.
 - Precision feeding tailors rations to individual cow needs, optimizing intake and reducing wastage.

Conclusion

Increasing Dry Matter Intake in lactating cows is a multifactorial challenge requiring integrated nutritional, environmental, and management strategies. Key approaches include:

- Formulating balanced rations with optimal fiber and energy density.
- Providing high-quality, digestible forages such as grass-clover silage.
- Ensuring feed accessibility and gradual diet transitions.
- Mitigating heat stress and monitoring cow health.
- Utilizing nutritional supplements like chromium and yeast to enhance metabolism and rumen function.

The latest research highlights the synergistic effects of these strategies, demonstrating that improving DMI not only boosts milk yield but also supports animal welfare and environmental sustainability. Dairy producers who adopt these evidence-based practices can expect improved productivity, profitability, and herd health.

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FISHERY_

Utilisation of Fish Processing Waste in Aquafeed - A Waste to Wealth Strategy

Dr. Tamana Latief, PhD Scholar

Aquaculture is one of the fastest growing food production sectors. Fish feed accounts for the highest operational costs in aquaculture with protein being the most expensive diet. Fish require high proportion of protein in their diet. Protein is responsible for fish growth and maintenance. So, in order to reduce the cost of fish production, alternate sources of protein need to be explored.

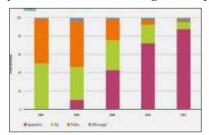
Fishmeal is the major conventional protein source in fish feed formulation. Fish meal obtained from whole fish is a nutrient-dense feed supplement that contain a wide range of nutrients. In addition to high quality protein, minerals and vitamins, there are several essential amino acids in fish meal. It also includes oil-soluble vitamins like vitamin A and D. Fishmeals have been praised for their good influence on the performance and health of livestock. But its use is discouraged due to high cost, reduced availability and non-sustainable to the environment. Hence, a variety of nonconventional protein sources (plant and animal) are under consideration to substitute fish meal partially or completely in fish diets. Fish meal is also produced from fish byproducts or fish waste. Fish processing waste in the form of non-edible tissues like viscera, fins, skin, portions of head, tail and airbladder obtained from fish processing units have immense potential to be used as a substitute for fish meal. They are a rich source of valuable compounds such as protein, lipid, enzymes, bioactive peptides, pigments, flavours, vitamins and minerals. Therefore, it is imperative to recycle these wastes into marketable products so as to add value to this waste and minimize environmental threat of pollution. This practice not only reduces waste but also provides a costeffective and environmental friendly source of nutrients for farmed fish. Recycling of these by-products into marketable products can also be a solid waste management strategy.

With increasing global fish production, a large quantity of material is available for processing and thereby increasing the amount of waste generated. About 70% of the fish is processed before final sale. Processing of fish involves stunning, grading, slime removal, deheading, washing, scaling, gutting, cutting and meat bone separation. During these steps, significant amount of waste depending upon the level of processing and type of fish is generated. In addition to this, a significant amount of the total catch from fish farming is discarded each year. Generally the yield calculated by the fish processing industry is based on a gutted fish with head-on, that is typically 40% on an average. Fish processing generates 35-40% edible meat and the remaining non-edible tissues. Fish processing waste can be valuable in aquaculture, serving as a source of ingredients for fish feed, fertilizer and even as a raw material for direct feeding promoting a more sustainable and circular economy. Fish

waste can also be a source of valuable bioactive compounds like collagen, chitin and chitosan which have applications in aquaculture and other industries.

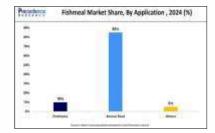
The majority of the fish wastes are disposed of in the water bodies. The aerobic bacteria present in the water breakdown the organic matter in the presence of oxygen leading to a considerable reduction of oxygen in water. Due to decomposition of algae, concentration of nitrogen, phosphorous and ammonia increases which lead to variation in pH and increases turbidity of water. The reduction of oxygen content in water creates an anaerobic condition that leads to the release of foul gases such as hydrogen sulphide, ammonia and greenhouse gases such as carbon dioxide and methane. These wastes also facilitate eutrophication leading to harmful algal blooms. Therefore, it is imperative to recycle these wastes into marketable products so as to add value to this waste and minimize environmental threat of pollution.

Compared to other animals, the percentage usage of fishmeal in aquaculture has increased significantly.



(SOFIA, 2021)





In 2024, the animal feed segment dominated the fishmeal market by holding the largest share. The dominance of the segment is due to the growing utilization of fish meals in animal diets across different sectors, as it is a nutrient rich and highly valuable feed.

Huge quantities of these resources are wasted daily or lost for the opportunity for the production of a number of valuable products (manure, feed). The fish waste produced in fish markets, processing plants and households can be collected free of cost and utilized in fish feed manufacture as an alternative effort to reduce and use waste. In Kashmir, the waste mainly collected from processing units, fish markets and households, will also solve the problem of fish waste disposal, which creates many issues to public and environment as well. Use and recycling of this waste as a substitute for fish meal in aquaculture production could significantly reduce pollution, reduce the cost of feed as well as the overall cost of fish production. Based on this background, the current project was aimed to evaluate the feasibility of fish waste collected from fish processing unit of Faculty of Fisheries as a protein source in fish feed formulation.

To achieve this, the following activities were undertaken:

- The fresh fish waste was collected from processing sector of Division of Post Harvest Technology, Faculty of Fisheries, SKUAST-K (Fig. 1).
- The waste was sorted to separate the fins and air- bladder. The left

over waste was used (Fig.2).



Fig.1: Fish Waste



Fig. 2: Sorted Fish Waste

- The waste especially the intestines were thoroughly cleaned of gut contents and washed repeatedly (Fig.3).
- The washed & cleaned waste was then kept in hot air oven for drying at 104°C for 48 hours (Fig.4).
- The dried waste (Fig. 5) was then ground into powder (Fig. 6) and analyzed for crude protein by Kjeldahl method (Fig.7) and crude fat by Soxhlet method (Fig.8).



Fig. 3: Cleaning of waste



Fig. 4: Drying of waste



Fig. 5: Dried fish waste



Fig. 6: Powdered fish waste



Fig.7: Crude protein analysis

FISHERY____



Fig.8: Crude fat analysis

PROXIMATE ANALYSIS

| Ingredient | Crude protein | Crude fat |
|--------------|---------------|-----------|
| Fish viscera | 33.92% | 12.22% |

FEED FORMULATION

- After the proximate analysis of fish viscera, crude protein was found to be 33.92% and crude fat was found to be 12.22%. Hence, this can be used as a protein source as basic fish feed ingredient, replacing fish meal partially.
- An effort was made to formulate 32% protein level feed, using Pearson's Square method.
- The following ingredients were used in feed in addition to powdered fish waste.

| INGREDIENT | QUANTITY |
|---------------------------|----------|
| Fish viscera | 17.51g |
| Fish meal | 3.09 g |
| MOC | 32.88 g |
| Rice bran | 20.26 g |
| Wheat flour | 20.26 g |
| Vegetable oil | 5 g |
| Vitamin & mineral mixture | 1 g |

FEED MANUFACTURE

- Hand extruder of suitable dye size was used.
- Extrudes were spread on sheets of paper and kept under ceiling fan overnight for drying.
- After drying they were stored in air-tight plastic container to be used for feeding cultured fishes.







Fig. 9, 10 & 11: Manufacturing of feed

Keeping in view this appreciable nutritional value, fish viscera can be used as an effective protein source for partial replacement of fish meal in fish feed formulation.

Benefits

- Reduce the cost of feed, value addition of fish waste and disposal mitigation of fish waste.
- Cost effective and reduces reliance on wild caught fish for fish meal.
- High in protein, essential amino acids and minerals.
- Reduces waste disposal issues and environmental pollution.
- Enhances resource efficiency and sustainability.

Therefore the fish processing industry and related stakeholders can intervene and make progress in future in terms of resource mobilization, value addition, product diversification and sustainable growth.

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GENERAL __

Factors Involved in Post Weaning Diarrhea and Measures to Mitigate it.

Dr. Hrishikesh Tekade, , MVSc

Modern Pig Production

Pigs (Sus domesticus) are among the most important livestock species for global meat production due to their high prolificacy, efficient feed conversion, rapid growth, high dressing percentage, and short gestation period. Despite these advantages, the weaning phase remains the most challenging period in pig production, often leading to health and growth setbacks.

The role of the GIT

The gastrointestinal tract (GIT) in pigs is highly dynamic, playing essential roles beyond digestion and nutrient absorption, including fluid balance, enzyme and mucin secretion, immune defense, and maintaining a barrier against pathogens. Its function relies on complex interactions between nutrition, the mucosal membrane, and gut microbiota, all critical for overall pig health and productivity. During the commercial production cycle nursing, nursery, growing, and finishing, pigs face their greatest challenges at weaning, when they transition from sow's milk to solid feed and encounter numerous stressors: declining passive immunity, abrupt separation, transport, new diets, social mixing, and increased pathogen exposure. These stressors often lead to reduced feed intake, which, combined with immature digestive and immune systems, predisposes piglets to gastrointestinal disturbances, growth retardation, diarrhea, and higher mortality. Rapid adaptation to these challenges is crucial for piglet health and efficient production.

Results of several studies have demonstrated that weaning in pigs induces a breakdown in intestinal barrier function characterized by a significant decline in intestinal transepithelial electrical resistance and increased permeability to paracellular probes in Ussing chamber experiments. Enterotoxigenic Escherichia coli (E. coli) is a significant pathogen responsible for causing enteric diseases in both humans and animals. In pigs, infection with F18+ E. coli in weaned pigs triggers inflammation and oxidative stress, damages the villi in the jejunum, and disrupts the intestinal barrier. These effects lead to postweaning diarrhea and impaired growth performance in affected animals (Duarte et al., 2024).

However, implementing improved animal management protocols and a targeted dietary approach to enhance intestinal health and development during the weaning phase can effectively reduce the occurrence of post-weaning diarrhea without relying on medication.

Factors involved in post weaning diarrhea and their mitigations.

1. Diet composition

·Reduced feed intake and Importance of creep feed:

Reduced feed intake immediately after weaning leads to negative changes in piglet intestinal morphology, such as shortened villi and decreased enzyme activity, impairing nutrient absorption and gut barrier function, and increasing the risk of diarrhea and growth retardation. Early and sufficient feed intake post-weaning is crucial for gut health and overall performance.

Offering feed with a consistency closer to milk, such as liquid feed or supplemental piglet milk, can help maintain feed intake during the transition, resulting in higher weaning weights and improved post-weaning growth. Providing creep feed before weaning also supports gut maturation by stimulating digestive enzyme activity (e.g., pancreatic enzymes and brush border enzymes) and microbiota development, making piglets better prepared for the dietary shift and improving nutrient digestion and absorption after weaning. This indicates that piglets consuming creep feed during the weaning period develop a more mature digestive system, enabling them to digest and absorb nutrients more effectively than those not given creep feed, while their gut microbiota attains increased

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resilience to disruptions caused by weaning.

• High Protein:

After weaning, piglets require high protein intake for growth and immune function, but their immature digestive systems cannot fully digest excess protein. Undigested protein ferments in the hindgut, producing ammonia, polyamines, indoles, and phenols, which raise intestinal pH, promote pathogenic bacteria like E. coli, and increase the risk of diarrhea by disrupting gut health and electrolyte balance. Toxic byproducts such as cadaverine and putrescine further exacerbate diarrhea and intestinal inflammation. Reducing dietary crude protein (CP) as much as possible (without compromising performance), balancing essential amino acids, and using highly digestible protein sources can significantly lower post-weaning diarrhea (PWD) incidence (Wang et al., 2018).

Additionally, supplementing with feed enzymes like proteases and adding organic acids such as benzoic acid to lower gut pH are effective strategies to improve protein digestibility and control PWD (Diao et al., 2014).

Earlier studies have demonstrated that functional amino acids, including arginine, cysteine, glutamine, and glutamate, can improve immune function in the intestinal mucosa (such as boosting sIgA secretion), mitigate oxidative stress, stimulate proliferation of enterocytes, and strengthen the gut barrier (via heightened expression of tight junction proteins) in weaned piglets.

• Soluble Fiber:

While fiber in general is beneficial for

gut health, a high proportion of soluble fiber can increase gut viscosity. Increased viscosity can slow down the passage of digesta through the intestines. This slower transit time can create an environment conducive to pathogenic bacterial overgrowth, including potentially harmful bacteria.

Insoluble DF primarily acts in the large intestine by increasing faecal bulk and passage rate, modulation of the large intestinal microbiome, and increased production of short chain fatty acids (SCFAs), which may positively affect gut health. Insoluble fibre sources decrease digesta retention time in the proximal GI-tract, which, in turn, may reduce the proliferation of pathogens in the small intestine, and thereby, especially relevant to reduce the risk of suffering from PWD. It is also suggested that fibre sources which resemble host receptors might interrupt the adherence of bacteria to the intestinal mucosa, thereby reducing E. coli proliferation in the small intestine by blocking E.coli adhesion to the gut epithelial cells.

It's important to have a balanced fiber content with the right proportions of soluble and insoluble fiber. Dietary inclusion of carbohydrases (xylanase, β -glucanase) which increase the in vivo availability of short-chain oligosaccharides has beneficial effects on gut health, and thus preventing PWD.

• Antigenic proteins:

It has been reported that the presence of some ingredients in the feed for weaners, such as soybeans, seems to favor the occurrence of PWD. This could be due to the presence of trypsin inhibitors or antigens inducing a localized immune response. Soybean glycinin and β -conglycinin, the

predominant antigenic proteins in soybeans, serve as two key antinutritional factors linked to post-weaning diarrhea in piglets. Furthermore, research demonstrated that soybean meal (SBM) lowers the duodenal specific activities and increases crypt depth in pigs, indicating that such components should be excluded from the diets of early-weaned piglets.

Feedstuffs processing mainly includes physical methods (expansion, heating, mechanical processing), chemical methods (acid and alkali treatment, alcohol solution treatment, salt treatment), and biological methods (biofermentation, enzyme treatment, breeding). Most feedstuffs processing methods, including biofermentation, bulking, enzyme treatment, not only reduce or inactivate antigenic proteins and pathogens, but also physically alter the raw material through agglomeration or hydrolysis, thereby enhancing feed digestion and absorption.

2. Low Sanitary Conditions:

Maintaining a clean and hygienic environment is paramount in preventing the spread of pathogens and supporting the health of young animals:

• Pathogen Bacterial Load: Poor sanitation leads to a higher concentration of pathogenic bacteria in the environment. Young, recently weaned animals have developing immune systems and are more susceptible to these pathogens. Exposure to a high bacterial load can overwhelm the gut's defenses, leading to infection, inflammation of the intestinal lining (enteritis), and

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consequently, diarrhea. Common pathogens involved can include *E. coli, Salmonella,* and *Clostridium* species.

• Gut Inflammation: The presence of pathogens and the body's immune response to them trigger inflammation in the gut. This inflammation disrupts the normal absorptive and digestive functions of the intestine, leading to malabsorption of nutrients and increased fluid secretion, resulting in diarrhea. Chronic inflammation can also damage the intestinal villi, further impairing nutrient uptake and exacerbating the condition.

Studies have shown that piglets reared under unclean conditions experience higher levels of ammonia and hydrogen sulfide in the environment, which can lead to distress, reduced feed intake, and impaired gut morphology, such as shorter villi and shallower cryptsfactors linked to poorer growth and higher diarrhea incidence (Jayaraman et al., 2016).

Maintaining high standards of cleanliness in the nursery is critical for optimal performance of piglets partly because of its direct or indirect effects on gut health and function.

3. High Temperature and Low Ventilation:

• During the post-weaning period it is essential to provide the correct environmental temperature (26-28°C) to keep pigs in their thermoneutral zone. A high ambient temperature reduces intestinal peristaltic activity due to a decrease of blood flow in the GIT and a reduction in the supply of

oxygen. This leads to intestinal hypoxia, inflammation, oxidative stress and promotion of bacterial colonization.

Cold conditions in weaner housing may exacerbate the severity of post-weaning diarrhea (Rouma et al., 2017). While effective ventilation helps to eliminate moisture, harmful gases, and partially regulates animal house temperatures. Ventilation determines air velocity at pig level and therefore plays an important role in the rate of heat loss, especially in young pigs. Eriksen et al. (2022) described an association between high ventilation index score and low PWD occurrence.

4. Stocking Density:

• High stocking density in pig pens can negatively impact piglet health and growth by increasing competition for feeder space, which reduces feed intake and growth performance-both crucial for gut development. Overcrowding also elevates stress, as indicated by higher plasma cortisol levels, and leads to compromised gut barrier integrity, with increased intestinal permeability and inflammation, raising the risk of diarrhea. Additionally, high density promotes oxidative stress and facilitates rapid pathogen spread, further challenging the immune system and increasing disease risk. Studies show that reduced space allowance results in shorter villi and poorer gut morphology, while more space supports better intestinal health and performance. A recommended minimum space

- allowance for weaned pigs is at least 0.34 m² per pig in slatted pens, though higher allowances may be needed in antibiotic-free systems (AAFC, 1993).
- Mixing piglets from different farms at weaning is common but often leads to aggressive behavior as pigs establish dominance, especially in the first few hours after grouping. This aggression can cause significant differences in food and water intake among individuals, impacting welfare and growth. Grouping piglets by sow parity or pre-weaning socialization-where piglets interact with nonlittermates before weaning-can reduce aggression and help to form stable social hierarchies, thereby minimizing stress and disease risk after weaning by reducing variation in the immune status of the piglets.

5. Infection:

- PWD (post-weaning diarrhea) is a multifactorial disease often involving mixed infections, with rotavirus and E. coli among the most prevalent pathogens in weaned piglets, along with coccidia, sapovirus, and Cryptosporidium parvum. Also porcine reproductive and respiratory syndrome virus (PRRSv) and mycotoxin can further increase susceptibility to severe outcomes from enterotoxigenic E. coli (ETEC) infections.
- Traditional approaches to combat infections have relied heavily on the use of antibiotics. However, the overuse and misuse of antibiotics have contributed to the emergence of antibiotic-resistant strains,

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posing a serious threat to both human and animal health.

- Strategies such as the addition of organic acids, plant components with antibacterial effects, antimicrobial peptides including bacteriocins, single-domain antibodies (nanobodies), bacteriophages, probiotics, fibre, and strategies that reduce the stomach/small intestine lumen pH, such as fermented liquid feed coarsely ground feed and mycotoxin binder, could be candidates to inhibit or reduce the growth of ETEC.
- Vaccination can be an effective approach to reduce the occurrence of PWD and to reduce infection pressure and increase immunity in the pig population.
- Addition of Probiotics, Prebiotics, Synbiotics to creep diet increases the chance of modulating the gut microbiota to improve gut health/robustness to disease.
- Biosecurity measures that reduce the risk of disease agents being introduced and spread in an animal and its environment can be followed. Biosecurity includes bioexclusion, bio-containment, and

bio management (Levis and Baker, 2011). Bio-exclusion (also known as external biosecurity) is preventing the entry of undesirable pathogens into the farm. Biomanagement is the combined effort to control economically infectious diseases that are already present in the farm population. Proper cleanliness and disinfection of the pig rooms, vaccinations, all-in/allout pig movement are some of the important procedures to minimize the pathogen build-up or enhance immunity levels in the pigs are the key components of bio management.

5. Boosting antioxidant and antiinflammatory capacity:

• Enhancing antioxidant capacity is vital for managing postweaning diarrhea (PWD) in piglets, as it helps counteract oxidative stress caused by weaning-related challenges such as dietary changes and environmental stressors. Antioxidant supplementation using vitamins (E, C), minerals (selenium, zinc), and natural compounds like tannic acid reduces reactive oxygen species,

supports mitochondrial and intestinal barrier function, and fosters a healthier gut microbiota, collectively lowering inflammation and the risk of diarrhea. These nutritional strategies not only improve gut health and resilience but may also reduce reliance on antibiotics in pig production.

Conclusion

Enteric disease in pigs results from a complex interplay between environmental pathogen load, the pigs' immune competence, and environmental stressors, making disease control a significant challenge for producers. While it is impossible to eliminate all disease risk, adopting improved husbandry practicesincluding enhanced sanitation, optimal stocking density, environmental management, dedicated nutrition, and robust biosecurity can significantly reduce disease incidence. These strategies promote healthy gastrointestinal development and function, helping to prevent gut disturbances such as piglet diarrhea.

Division of Veterinary Public Health ICAR-Indian Veterinary Research Institute Izatnagar, Bareilly - 243122 (U.P), INDIA.

CALENDAR OF EVENTS _____

OCTOBER 2025 08-10 VIETSTOCK EXPO & FORUM

At Saigon Exhibition and Convention Center (SECC),

Ho Chi Minh City, Vietnam Ph:+84 28 3622 2588

Email: vietstock@informa.com

16-18 AGRENA MIDDLE EAST

At EEC, New Cairo, Egypt Mobile: 8295733669

Email: maarcservices@gmail.com

OCT. - NOV. 2025

31-02 FEED TECH EXPO 2025

At Auto Cluster Exhibition Center, Pune

Contact: Prachi Arora,

Managing Partner, Benison Media

Ph:+91 8607463377 / +91 184 4047817

Email: info@feedtechexpo.com Website: www.feedtechexpo.com

NOVEMBER 2025 25-27 VIV MEA 2025

At Adnec Center, Abu Dhabi Khaleej Al Arabi Street.

Abu Dhabi, UAE

Contact: Renate Wiendels Ph: +31 6 5133 2877

Email: Renate@vnueurope.com

Website: www.vivmea.nl

26-28 POULTRY INDIA 2025

At Hyderabad International Convention

Centre

HITEX Exhibition Centre, Izzat Nagar,

Hyderabad - 500 084, A.P. Contact: Ms. Radhika

Office Administrator/ Poultry India

Mobile: 7997994331/34

Email: info@poultryindia.co.in; office3@poultryindia.co.in

Website: www.poultrvindia.co.in

JANUARY 2026 27-29 IPPE EXPO 2026

At Georgia World Congress Center, 285 Andrew Young International Blvd NW Atlanta, Georgia, USA

Ph: +1 678 514 1976

Email: ascuithorpe@ippexpo.org

Website: www.ippexpo.org

FEBRUARY 2026

07-09 PDFA INTERNATIONAL DAIRY & AGRI EXPO 2026

Cattle Fair Ground, Jagraon, Ludhiana (Punjab)

Contact: Progressive Dairy Farmers

Association (Punjab)

Mobile: 08427800484 / 8591540003

Website: pdfapunjab.com

12-14 52ND DAIRY INDUSTRY CONFERENCE 2026

At Yashobhoomi Convention Center, Sector-25, Dwarka, New Delhi Contact: Shri. Ashok Kumar Tripathi,

Secretary General

Mobile: 9811620563

Email: 52nddic@gmail.com

Web:www.52dic.in

26-28 THE POULTRY EXPO 2026

New Grain Market, Karnal, Haryana

Contact: Sonali Shelke

Project Head - The Poultry Expo

Pixie Expomedia Pvt. Ltd. Ph: +91 74 199 93008

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MARCH 2026

10-12 VICTAM & GRAPAS ASIA 2026

At Bitec Exhibition, Bangkok, Thailand

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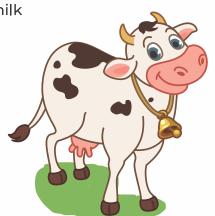
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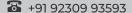
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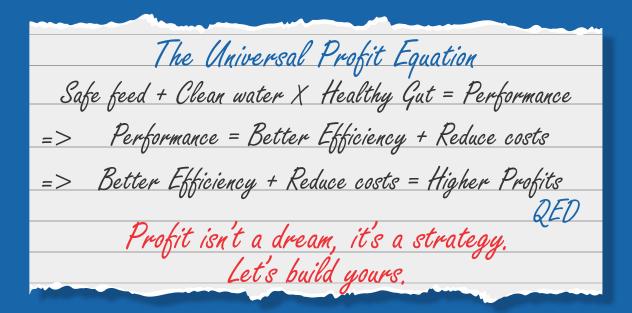
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