



**XII Conference of Indian Meat Science Association  
and  
National symposium  
on  
“Green and sustainable meat sector: Global game changer”  
September 26 - 28, 2024**

**Held at Department of Livestock Products Technology, College of Veterinary Science  
and Animal Husbandry, U.P. Pt. Deen Dayal Upadhyay Pashu Chikitsa Vigyan  
Vishwavidyalaya Evam Go Anusandhan Sansthan, Mathura, U.P. India 281001**

**Reports of Technical sessions**

The XII Conference of Indian Meat Science Association (IMSACON-XI) with the theme “green and sustainable meat sector: global game changer” was held at Department of Livestock Products Technology, College of Veterinary Science and Animal Husbandry, U.P. Pt. Deen Dayal Upadhyay Pashu Chikitsa Vigyan Vishwavidyalaya Evam Go Anusandhan Sansthan, Mathura, U.P. on 26-28 September 2024. More than 180 delegates comprising of scientists, University faculty members, policy makers/regulators from different Government agencies, entrepreneurs, exporters, students have participated in the event. The programme was inaugurated by Chief Guest Prof. (Dr.) Mandeep Sharma, Hon’ble Vice-Chancellor, NDVSU, Jabalpur. Dr. M. K. Chatli, Director, CIRG, Makhdoom and Dr. S. K. Barbudhe, Director, NMRI, Hyderabad were the Guest of Honor. Presidential Address was given by Prof. (Dr.) A. K. Srivastava, Hon’ble Vice Chancellor, DUVASU, Mathura. Dr. Vikas Pathak, Chairman, IMSACON-XII and Dean, College of Veterinary Science and Animal Husbandry, DUVASU, Mathura gave welcome address and Dr. Meena Goswami Awasthi, Organizing Secretary, IMSACOM-XII gave official vote of thanks at the end of inaugural function. Dr. P K Mandal, President, IMSA, Dr. M. Muthukumar, Pr. Scientist & Secretary, IMSA and Dr. Naveena, B.M., National Fellow have also graced the occasion.

**Thematic Session and Keynote lecture**

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|--------------------|--------------------------------------------------------------------------------|
| <b>Chairman</b>    | Prof. (Dr.) M. K. Agnihotri, Former Assistant Director General-ICAR, New Delhi |
| <b>Co-Chairman</b> | Dr. Arun Kumar Das, Principal Scientist, ICAR-IVRI regional station, Kolkata   |
|                    | Dr. Meena Goswami Awasthi, Associate Professor and In-charge, LPT,             |

|                    |                                                                          |
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|                    | DUVASU, Mathura                                                          |
| <b>Rapporteurs</b> | Dr. Sheikh Rafeh Ahmad, Assistant Professor, LPT, SKUAST-K.              |
|                    | Dr. Vijay Bhaskar Reddy, Assistant Professor & Head, LPT, COVS, Tirupati |

Dr. M. K. Chatli, Director, ICAR-CIRG, Makhdoom delivered the keynote lecture in thematic session on “Indian meat Industry: evaluate and innovate for sustainable meat production”. He raised the issues on global hunger index and mitigation strategies through genomic nutrition, renewable energy interventions. He also discussed about effective utilization of abattoir byproducts to solve environmental load and to improve the economics of slaughter houses.

### **Scientific Sessions**

#### **SESSION I. Sustainable practices in meat production to face the challenges of climate changes**

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|-------------|---------------------------------------------------------------------------------------|
| Chairman    | Dr. Kesava Rao, Ex-President, IMSA and Retd. Professor & Head, LPT, RIVER, Puducherry |
| Co-Chairman | Dr. Sanjay Yadav, Professor & Head, Livestock Products Technology, LUVAS, Hissar      |
|             | Dr. Arun Kumar Verma, Senior Scientist, GPT, CIRG, Makhdoom                           |
| Rapporteurs | Dr. Dinesh Chavhan, Assistant Professor, LPT, COVAS, Navania, Udaipur                 |
|             | Dr. Praneeta Singh, Assistant Professor, LPT, GBPUAT, Pantnagar                       |

In this technical session, following three lead papers were presented by:

1. Dr. M. K. Chatli, Director, ICAR-CIRG, Makhdoom - The Global Landscape of Goat Meat Industry
2. Dr. Brijesh Kumar Yadav, Professor, Veterinary Physiology, DUVASU, Mathura- Strategies to mitigate the emission of greenhouse gases from food animals
3. Dr. Arun Kumar Das, Principal Scientist, Eastern Regional Station, ICAR-Indian Veterinary Research Institute, Kolkata- Safeguarding the plate: essential oil based nano-emulsion as a key player in addressing antimicrobial resistance (AMR) and meat food safety

Total eight papers were presented by young faculty members and students. The presentations covered a variety of topics, including advances in meat processing, sustainability practices in animal husbandry, and innovations in meat preservation techniques.

## Recommendations:

- Future research should be focused on improving carcass yield to enhance the sustainability and profitability of the goat meat industry. Strategies such as optimizing breeding, feeding practices, and processing efficiency should be prioritized to meet growing demand and improve overall industry performance.
- Shift focus towards reducing greenhouse gas (GHG) emissions from monogastric animals like poultry and pigs, as they produce significantly lower methane than ruminants such as cattle. Implementing strategies like culling unproductive animals and introducing anti-methanogenic compounds in ruminant livestock should be explored to further reduce emissions and improve herd health.
- Investigate the use of plant extracts, particularly in nano-emulsions, as antimicrobial alternatives in meat production. This approach could offer a sustainable solution to combat antimicrobial resistance (AMR) while maintaining meat quality, including taste, texture, and color. Continued research into plant-based alternatives should be encouraged to address this growing public health concern.
- Adopt and scale up sustainable practices in meat processing to reduce waste and improve efficiency. The research presented in the session highlighted several advanced techniques in meat preservation and processing, which should be explored further for broader industry application.
- Foster innovation in alternative meat production methods, such as artificial meat, and explore the efficient use of agricultural by-products. These innovations could address food security challenges and provide solutions for reducing waste in the meat production process.
- Facilitate stronger collaboration between researchers, industry professionals, and policymakers to implement the findings from this technical session. Regular forums and conferences should be held to share emerging research and discuss the practical implementation of new technologies and practices in meat production.
- As global challenges such as climate change, rising demand for meat, and food safety concerns continue to grow, industry stakeholders should prioritize sustainable and innovative solutions. This includes scaling up research on environmental impact reduction, improving herd and animal health, and increasing meat production efficiency.
- Strengthen monitoring efforts on antimicrobial resistance (AMR) in meat production. More research should be conducted on the use of non-antibiotic alternatives and strategies

for controlling AMR in fresh meat, ensuring both public health safety and the longevity of antibiotics.

- Raise awareness within the meat industry about emerging technologies and practices that can transform production processes. The advancements presented in the oral and poster sessions should be disseminated widely to encourage adoption and innovation across the sector.
- Governments and industry leaders should implement policies that support sustainable practices in meat production. This includes providing funding for research in GHG reduction, antimicrobial resistance, and sustainable meat production alternatives to ensure the industry can meet future demands while minimizing environmental and health impacts.

## **SESSION II. Promoting green practices through effective animal byproducts utilization and waste management in meat industry**

|             |                                                                                                                                                                     |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chairman    | Dr. Vikas Pathak, Dean, COVAS, DUVASU, Mathura                                                                                                                      |
| Co-Chairman | Dr. Amit Singh, Professor and Head, VAHE, DUVASU, Mathura                                                                                                           |
|             | Dr. Abhinuv Upadhayay, Assistant Professor, University of Connecticut                                                                                               |
| Rapporteurs | Dr. M. Kiran, Associate Professor & Head, Livestock Products Technology, KVAFSU, Bidar                                                                              |
|             | Dr. Ajaykumar Sureshbhai Patel, Assistant Professor , Livestock Products Technology , College of Veterinary Science and A.H., Kamdhenu University, Junagadh, Gujrat |

In this technical session, following three lead papers were presented by:

1. Dr. Yogesh Gadekar, Senior Scientist, LPT, ICAR-NMRI, Hyderabad- Efficient utilization of byproducts from slaughter house
2. Dr. P. K. Mandal, President, IMSA and Professor and Head, Livestock Products Technology, RIVER, Puducherry- Green technologies for valorization of poultry processing byproducts
3. Dr. Archana Pathak, Professor & Head, Veterinary Anatomy, College of Veterinary Science & A.H., DUVASU, Mathura - Novel techniques for utilization of slaughterhouse byproducts for higher economic returns

Total four oral papers were presented by young faculty members and students. The presentations were focused on various by-products generated by the meat industry and the

pressing need for their salvation, potential of poultry by-products processing and introduced novel techniques for utilizing slaughterhouse by-products, particularly in veterinary education.

#### **Recommendations:**

- Researchers should focus on efficient utilization of slaughter house by-products
- Emphasize the importance of identifying and harnessing the potential of meat industry by-products.
- Encouraging industry collaboration to scale up by-product processing, on how these collaborations can turn waste materials into commercially viable solutions for diverse industries, including pharmaceuticals and cosmetics.
- Investigate and elaborate on the method of hydrolyzing by-products of abattoirs and convert them into valuable commodities, contributing to the sustainability of the meat industry.
- Adoption of environmentally friendly methods to enhance product value and reduce environmental impact.
- Emphasize the importance of continued research and innovation in the utilization of by-products and developing new techniques for by-product processing or exploring new industrial applications that can drive economic and environmental benefits.
- Corrective actions need to adopt waste-reduction strategies and integrating sustainability into everyday practices in meat production. By turning waste into valuable resources, the meat industry not only reduces its environmental footprint but also unlocks new revenue streams.

#### **SESSION III. Advancements in fresh meat technology to match evolving consumer demand and dynamic marketing landscape**

|             |                                                                 |
|-------------|-----------------------------------------------------------------|
| Chairman    | Dr. Sarfaraz Wani, Ex Dean & Director Research, SKUAST- K       |
| Co-Chairman | Dr. Sunil Kumar, Professor & Head, Division of LPT, SKUAST-J    |
|             | Dr. Devendra Kumar, Senior Scientist, LPT, ICAR-IVRI, Izatnagar |
| Rapporteurs | Dr. O.P. Malav, Associate Professor, LPT, CVAS, Rampura Phul    |
|             | Dr. Shalini Vaswani, Assistant Professor, ANN, DUVASU, Mathura  |

In this technical session, following four lead papers were presented by:

1. Dr. S. B. Barbuddhe, Director, ICAR-National Meat Research Institute, Hyderabad-  
One Earth, One Health Approach for Green and Sustainable Meat Sector

2. Dr. Girish Patil, Director, ICAR-NRC on Mithun, Nagaland - Mithun: magnificent meat animal of northeast India
3. Dr. A. R. Sen, Principal Scientist and Head, Livestock Products Technology, IVRI, Izatnagar - Sustainable organic meat production - opportunities and challenges
4. Dr. P. P. Prabhakaran, Professor and Head, Livestock Products Technology, GBPUA&T, Pantnagar- Can turmeric replace nitrite in meat industry?

Total eleven oral papers were presented by faculty members and students. The session highlighted the latest developments and innovations in the meat sector, particularly focusing on the areas of meat quality, carcass characteristics, and nutritional profiling.

### **Recommendations:**

- Emphasise the potential of Mithun as a viable and sustainable product, both in local and global markets and efforts should focus on educating consumers about the health benefits and superior quality of Mithun meat, positioning it as a niche product in the meat industry.
- Promotion of portable meat production units, which are particularly useful in remote or rural areas to improve meat processing efficiency, reduce transportation needs, enhance product freshness, and lower the environmental impact of traditional meat production facilities.
- Focusing on the growing consumer demand for healthier, low-fat meat products by promoting research into fat replacers in meat emulsions by using alternative ingredients to maintain the texture and mouthfeel of traditional meat products while offering a healthier option for consumers.
- Investing the best practices for animal handling to ensure high-quality products that meet consumer preferences.
- Need for the meat industry to adapt to growing consumer preferences for sustainable, efficient, and ethically produced products.
- Encouraging research into more sustainable production systems and technologies will help future-proof the industry and ensure its relevance in a rapidly changing market.
- Emphasize the importance of developing meat products that cater to this demand, such as lower-fat, higher-protein, or organic options. Industry leaders should be advised to conduct consumer research and incorporate feedback into product development to meet these preferences.
- Strengthen collaboration between researchers, meat producers, and technology developers to drive innovation in the meat sector.

#### **SESSION IV. Novel approaches for processing, preservation and packaging of meat products**

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|-------------|------------------------------------------------------------------------------------------------------------|
| Chairman    | Dr. P. K. Mandal, President, IMSA and Professor and Head, Livestock Products Technology, RIVER, Puducherry |
| Co-Chairman | Dr. Indu Upadhaya, Assistant Professor, University of Connecticut                                          |
|             | Dr. Vasudevan, Associate professor & Head, LPT, CoVAS, Manuthy, Kerala                                     |
| Rapporteurs | Dr. Anurag Pandey, Assistant Professor, Livestock Products Technology, PGVIR, Jaipur                       |
|             | Dr. Gauri Jairath, Scientist, Regional Centre, IVRI, Palampur                                              |

In this technical session, following four lead papers were presented by:

1. Dr. Saurabh Kumar Laskar, Professor and Head, LPT, Khanapara, Guwahati - The health implication of smoked meat and fish consumption: Risks and remedies
2. Dr. Sunil Kumar, Professor and Head, LPT, SKUAST-J - Traditional meat products of Jammu and Kashmir: opportunities and challenges
3. Dr. A. K. Biswas, Principal Scientist, IVRI, Izatnagar- Cutting-edge approaches in meat processing: enhancing nutrition, safety, and well-being
4. Dr. Pragati Hazarika, Professor and Head, LPT, Mizoram - Food safety considerations and research priorities for meat and meat products

Total fifteen oral papers were presented by faculty members and students. These presentations covered a wide range of topics related to the advancement and sustainability of the meat industry, with several key recommendations emerging from the discussions.

#### **Recommendations:**

- Emphasize the importance of scientific interventions to document, standardize, and modernize traditional meat processing techniques.
- Applying modern scientific methods can enhance the quality of these products while preserving cultural heritage, ensuring they meet contemporary consumer demands and regulatory standards.
- Need for organizational and financial support for small and medium-sized enterprises (SMEs), particularly in developing economies where meat production is often heavily reliant on small-scale operations.
- Include a focused section on the safety risks associated with polycyclic aromatic

hydrocarbons (PAHs), which can form during meat processing, particularly grilling and smoking.

- Addressing this carcinogenic risk is crucial for maintaining consumer trust in meat safety and ensuring public health protection.
- Focus on new innovative non-thermal processing technologies such as High Hydrostatic Pressure (HHP), Pulsed Electric Field (PEC), Ultrasound (US), and cold plasma.
- Implementation of Good Hygienic Practices (GHP), Good Agricultural Practices (GAP), Hazard Analysis and Critical Control Points (HACCP), and proper thermal processing throughout the meat production process.
- Focus on the importance of outreach to various stakeholders in the meat production chain, including industrial personnel, farmers, and consumers.
- Encourage continued research into sustainable, consumer-driven solutions for meat production. The report should highlight the need for industry-driven innovations that address environmental sustainability, health concerns, and ethical production. Research should focus on finding more efficient, environmentally friendly methods of meat production, which are aligned with modern consumer demands for sustainability and health-conscious choices.

## **SESSION V. Leveraging molecular and omics approaches for producing globally competitive meat and meat products**

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|-------------|--------------------------------------------------------------------|
| Chairman    | Dr. Girish Patil, Director, ICAR-NRC on Mithun, Nagaland           |
| Co-Chairman | Dr. Nitin Mehta, Associate Professor, LPT, GADVASU, Ludhiana       |
|             | Dr. Yogesh Gadekar, Senior Scientist, LPT, ICAR-NMRI, Hyderabad    |
| Rapporteurs | Dr. Subhash Kumar Verma, Assistant Professor, LPT, COVAS, Anjora   |
|             | Dr. Sanjay Kumar Bharti, Assistant Professor, LPT, DUVASU, Mathura |

In this technical session, following three lead papers were presented by:

1. Dr. B. M. Naveena, Principal Scientist, ICAR-NMRI, Hyderabad - Mass Spectrometry-based proteomic approaches and rapid lateral-flow assay tools for ensuring meat quality and safety
2. Dr. Prince Immanuel, Principal Scientist, ICAR-IVRI, Bareilly - Future frontier: harnessing AI for sustainable and efficient meat production and processing

3. Dr. Muthukumar, Principal Scientist, ICAR- ICAR-NMRI, Hyderabad - Application of chromatography and mass spectrometry for safe meat foods

Total five oral papers were presented by faculty members and students. These presentations focused on the latest advancements and emerging trends in the meat sector. From these presentations and discussions, several key recommendations emerged that can help address current challenges and push the industry forward in terms of innovation, sustainability, and animal welfare.

#### **Recommendations:**

- There is a need to undertake extensive research work and develop Lateral Flow Assay based field level kits for various applications in the meat sector including species identification, detection of chemical residues and pathogens in meat and meat products.
- Extensive research on utilizing aptamers in place of monoclonal antibodies need to be undertaken to prevent extensive utilization of lab animals for raising antibodies and to increase specificity.
- Meat sector must not be left out of the revolution in artificial intelligence. AI can be utilized in animal welfare, slaughter line, carcass grading, splitting, cooking etc. Collaborative work with the IT experts need to be established to develop AI tools for meat sector.
- Extraction and utilization of extracellular matrix from the animal byproducts is a promising area for profitable utilization of the byproducts. ECM can be used for various biomedical applications including wound healing.
- Emphasise on developing advanced field-level testing kits to exploring the use of AI and aptamers, the focus is on improving efficiency, reducing waste, and increasing the sector's ability to meet consumer demand in a safe and ethical manner.

#### **SESSION VI. Policy issues, regulatory frameworks and extension strategies for bringing paradigm shift in meat sector**

|             |                                                                                             |
|-------------|---------------------------------------------------------------------------------------------|
| Chairman    | Dr. A. Kalaikannan, Professor and Head, TANUVAS                                             |
| Co-Chairman | Dr. Ritesh Taneja, CEO, Porkish Delight                                                     |
|             | Dr. Chetna Gangwar, Associate Professor, VCC, DUVASU, Mathura                               |
| Rapporteurs | Dr. Muneendra Kumar, Associate Professor, ANN, DUVASU, Mathura                              |
|             | Dr. Arun Kumar, Assistant Professor, Livestock Products Technology, CoVAS, Navania, Udaipur |

In this technical session, following two lead papers were presented by:

1. Dr. S. K. Mendiratta, Joint Director, ICAR-IVRI - Synchronization of teaching curriculum and research with New Education Policy for augmentation of meat sector
2. Dr. Abhinav Upadhyay, Assistant Professor, University of Connecticut- Sustainable poultry production for food security: current trends and future directions

Total six oral papers were presented by faculty members and students covering a wide range of important topics aimed at improving education, sustainability, and policy in the meat sector.

### **Recommendations:**

- Mitigation strategies should be made to tackle problems like lack of student exposure to the meat industry, insufficient research output, low teaching standards, and limited practical exposure to real-world meat processing and production environments.
- Integrating hands-on training to provide students with a comprehensive understanding of meat sector.
- Need of new innovations in poultry management, including better waste management systems, resource-efficient feed practices, and enhanced animal welfare standards.
- Comprehensive policies around goat slaughter, particularly in countries where goat meat is a primary source of protein should be form.
- Focusing on how these safety protocols help ensure meat products are free from contamination and meet the highest food safety standards.
- Establishment of strategies for making goat farming more accessible and profitable for smallholder farmers while ensuring the production of high-quality meat for local and international markets.

### **SESSION VII. Alternate based foods**

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|-------------|------------------------------------------------------------------------|
| Chairman    | Dr. Vinod Sidhu, Professor and Head, Animal Nutrition, DUVASU, Mathura |
| Co-Chairman | Dr. Geeta Chauhan, Principal Scientist, LPT, ICAR-IVRI, Izatnagar      |
|             | Dr. Ashok Malik, Associate Professor, LPT, LUVAS, Hisar                |
| Rapporteurs | Dr. Umesh Suradkar, Assistant Professor, LPT, PGIVER, Jaipur           |
|             | Dr. Bidyutprabha Mishra, Assistant Professor, LPT, OUAT, Bhubaneswar   |

In this technical session, following three lead papers were presented by:

1. Dr. Sanjay Yadav, Professor and Head, LPT, LUVAS, Hisar - From waste to wonder: Valorising plant by-products as sources of natural antioxidants in meat products

2. Dr.Y. Babji. Principal Scientist, NMRI, Hyderabad – Plant derived eco-friendly trending natural preservatives for extending the storage stability of livestock products
3. Dr. Nitin Mehta. Associate Professor, LPT, GADVASU, Ludhiana- Encapsulation of essential oils for quality control of livestock products

Total nine oral papers were presented by faculty members and students on use of plant by-products and whole plants, potential of plant extracts and essential oils and encapsulation of essential oils, valuable insights into the latest innovations and sustainable practices in the meat industry.

### **Recommendations:**

- Enhancing the use of plant by-products, natural preservatives, and functional ingredients by replacing synthetic sources, to improve the nutritional quality, shelf life, and sustainability of meat products.
- Strategies should be developed to encourage consumers to adopt natural preservatives in meat products for cleaner and more natural food options.
- The promotion of technologies like the encapsulation of essential oils is advised, as it enables the long-term release of antioxidant and antimicrobial agents.
- The use of plant-based solutions, natural preservatives, and innovative techniques such as encapsulation, as they offer promising opportunities to enhance product quality, cater to consumer demand for healthier choices, and reduce the environmental impact of meat production.

### **SESSION VIII. Industry-Academia Interface fostering collaboration for meat sector advancement**

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|-------------|------------------------------------------------------------------------|
| Chairman    | Dr. S. K. Mendiratta, Joint Director (Academics), ICAR-IVRI, Izatnagar |
| Co-Chairman | Dr. Santhi, Professor, LPT, TANUVAS                                    |
|             | Dr. Dinesh Krofa, Associate Professor, LPT, COVAS, Palampur            |
| Rapporteurs | Dr. Sagar Chand, Scientist, Livestock Products Technology, ICAR-IVRI   |
|             | Dr. Parul, Assistant Professor, VPH, CVSc& AH, DUVASU, Mathura         |

In this technical session, following three lead papers were presented by:

1. Dr. P. K. Shukla, Professor and Head, Poultry Science DUVASU, Mathura - Interventions for ensuring sustainability of poultry value chain: System-based approaches

2. Mr. Rajesh, K., Chief Sustainability and Quality Officer, Licious foods – Sustainable Carbon Neutral Meat and Poultry Industry- Way Forward
3. Dr. S. P. Fonglan, General Manager, Allana sons Pvt Ltd Allana Centre, Fort, Mumbai - Challenges and opportunities of green meat production in India

Lead lectures were followed by panel discussion to bring together various meat and poultry sector stakeholders and synthesize a document highlighting their contributions in Nation building

**Panel discussion:** Dr. S. B. Barbuddhe, Director, NMRI, Hyderabad

Dr. Manish Kumar Chatli, Director, CIRG, Farah

Dr. Girish Patil S., Director, NRC on Mithun

Dr. Muthukumar M., Principal Scientist, NMRI, Hyderabad

Dr. Atul Saxena, Director Extension, DUVASU, Mathura

Dr. P. K. Shukla, Professor and Head, Poultry Science, DUVASU, Mathura

Dr. Vinod Kumar, Director Research, DUVASU, Mathura

Chief General Manager, NABARD

Dr. S. P. Fonglan, General Manager, Allanasons Ltd., New Delhi

Mr. Rajesh, Head, Safety and Sustainability Division, Delightful Gourmet Pvt Ltd., (Liciuos)

Mr. Shirish Dhopeswar, Chairman and Managing Director, Dhopeswar Engg. Pvt. Ltd.

Dr. Ritesh Taneja, CEO, Porkish Delight

Dr. Dinkar Salke, Head MFPP & Sr KAM, Kerry Ingredients

Dr. Sandeep, Neat Meat, Biotech Building, University of Delhi South Campus, New Delhi

Mr. S B Senthil Kumar, Managing Partner, Bhairav Renderers, Coimbatore

Ms. Tanu Rustagi, ATS Food Equipment, Ghaziabad

Mr. Ratnesh Ratna, Business Manager, SR Bio Systems Pvt Ltd

Mr. Atul Singh, Business Manager, SR Bio Systems Pvt Ltd

The concerns, challenges, and expectations of stakeholders in the meat and poultry sector were thoroughly discussed during the session. Key recommendations, along with the necessary policy reforms and government interventions, will be compiled into a comprehensive "Policy Document." This document will be shared and disseminated across various Ministries, government agencies, departments, and relevant stakeholders, fostering greater awareness and action in the sector.

**Recommendations:**

- Need of qualified veterinarians in abattoirs to combat the rising demand of wholesome and safe meat to fight against hunger and malnutrition
- Resting time of food animals in lairage should be increased to minimum 24 hours to achieve better quality meat
- Incorporation of anti-methanogenic diet in food animals to minimize carbon footprint
- Special attention should be given to the byproducts generated during slaughter and meat processing industries
- Channelization of poultry and hatchery water utilization to generate saleable products and generate revenue stream.

The valedictory programme of IMSACON-XII was concluded on 28<sup>th</sup> September, 2022 in the afternoon. Prof. (Dr.) A. K. Srivastava, Hon'ble Vice Chancellor, DUVASU, Mathura was the Chief guest of the occasion. Dr. S K Mendiratta, Joint Director (Acad.), ICAR-IVRI and Dr. Girish Patil S. Director, NRC on Mithun were Guest of honor. The report of each session was presented by Technical Secretary.

**Organizing Team****Patron**

Prof. A. K. Srivastava, Vice-Chancellor, DUVASU, Mathura

**Chairman**

Prof. Vikas Pathak, Dean, COVSc., DUVASU, Mathura

**Organizing Secretary**

Dr. Meena Goswami Awasthi, Associate Professor, Department of LPT

**Co- Organizing Secretaries**

Dr. Sanjay Kumar Bharti, Assistant Professor, Department of LPT

Dr. Rajneesh Sirohi, Associate Professor, Department of LPM

**Technical Secretaries**

Dr. Amit Singh, Associate Professor, Department of VAHEE

Dr. Amitav Bhattacharya, Associate Professor, Department of Poultry

Dr. Shalini Vaswani, Assistant Professor, Department of ANN

**Treasurer**

Dr. Chirag Singh, Assistant Professor, Department of LPT