



INDIAN MEAT SCIENCE ASSOCIATION (Reg. No. 307/2001)

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Webinar Title: **Indian meat export sector over last five decades: A story of growth and resilience**

Date & Time: 22nd August 2025, 4:00 PM IST

Platform: Zoom

Organized by: Indian Meat Science Association (IMSA), Hyderabad

Resource Person: **Dr. N. Kondaiah**

Former Director NRC Meat

Scientific Advisor, All India Buffalo and Sheep Meat Exporters Association

The lecture session commenced with opening remarks from Dr. B. M. Naveena, Principal Scientist, ICAR–National Meat Research Institute, Hyderabad, who welcomed the participants and introduced the theme “*Indian Meat Export Sector – Over the Last Five Decades: A Story of Growth and Resilience.*” He then introduced the distinguished resource person, Dr. N. Kondaiah, Former Joint Commissioner (Meat & Meat Products, DAH–GOI), Ex-Head of Livestock Products Technology at IVRI, Ex-Director of ICAR–NRC on Meat, and currently Scientific Advisor to the All India Buffalo & Sheep Meat Exporters Association.

Dr. Kondaiah outlined the growth of buffalo meat exports from their modest beginnings in the 1970s, when frozen carcasses were first shipped to the Middle East. The 1990s liberalization of trade policies and modernization of abattoirs enabled a transition to deboned and deglanded frozen meat, enhancing international acceptance. By the 2000s, India had become the world’s leading exporter, diversifying into Southeast Asian and African destinations while securing OIE certification. Exports peaked in the 2010s at 1.4 million tonnes annually, largely supported by markets in Vietnam, Malaysia, Egypt, Jordan, and Gulf countries. Though the COVID-19 pandemic disrupted trade between 2020–22, recovery was rapid, and since 2023, the sector has focused increasingly on value addition, sustainability, and traceability. The sustained expansion of exports has been driven by India’s large buffalo population, competitive production costs, modern processing plants, and proactive trade diplomacy. Resilience stems from diversified export markets, flexibility in supplying chilled

and frozen meat, strict compliance with sanitary and phytosanitary (SPS) norms, and private sector investment. Exports rose from just 2,000 tonnes in the 1970s to over 14 lakh tonnes by 2015, stabilizing at 12–13 lakh tonnes in recent years. Value increased from ₹100 crores in 1991 to over ₹31,000 crores in 2024, with unit export prices rising from ₹50/kg in 2005 to ₹245/kg in 2024. Dollar-denominated prices ranged between US\$1–3/kg, but Dr. Kondaiah suggested India could achieve US\$5/kg by establishing FMD-free zones and promoting the productive use of male buffalo calves (MBCs).

Historically, buffaloes were not slaughtered for meat; hides were mostly recovered from dead animals. Over decades, however, buffaloes have become vital for milk, meat, leather, and draught power. Their population rose from 14.82 million in 1951 to 109 million in 2019—a 641% increase, surpassing projections of the National Commission on Agriculture (1976), which had advocated fattening of male calves for meat production. Buffaloes possess notable strengths: conversion of crop residues into milk and meat, adaptability to varied climates, and disease resilience. Buffalo meat is nutritionally superior to beef, being leaner, richer in protein, lower in fat and cholesterol, and higher in vitamins B6 and B12. Its firm white fat and tenderness have enhanced consumer acceptance globally. Moreover, Indian buffalo meat is widely acknowledged as free from hormones, antibiotics, and pesticide residues due to traditional rearing practices. Global beef exports in 2024 were valued at US\$70 billion. Brazil led with US\$9.3 billion, followed by Australia and the USA, while India ranked fourth at US\$3.2 billion (4.5% share). China remained the top importer, whereas Vietnam, Egypt, and Malaysia together accounted for nearly half of India's exports. The sector is dominated by large players such as Allana, which alone handles nearly 50% of exports, followed by Fair Exports, Al HamdAgro, Mirha, and Al Ammar.

In 2024–25, buffalo meat accounted for 80% of India's total animal product export value (₹34,000 crores), far surpassing dairy (14%) and minor shares from sheep, goat, and casings. Future projections indicate buffalo meat production could reach 41.8 lakh tonnes by 2025, generating export earnings exceeding ₹1.35 lakh crores. A major opportunity lies in the better utilization of male buffalo calves, which currently suffer from neglect and high mortality. Despite India's global leadership in total production, per-animal yields remain below those of Egypt, Nepal, and Vietnam. Improved calf management and fattening practices could increase productivity by up to 350%. Dr. Kondaiah highlighted the demographic imbalance in buffalo populations, where rising female calf numbers contrast with neglected male calves facing high mortality. He recommended that the need for male buffalo calf (MBC) schemes, suggesting that a government program for 10 lakh calves with

Rs.700 crores investment could yield Rs.4,200 crores in export earnings from one lakh tonnes of meat. Economic analyses showed calf fattening under farmer-managed, fodder-based systems is profitable, though subsidies and support are vital for scaling up.



Glimpses from Dr.N. Kondaiah's presentation

Dr. N. Kondaiah addressed key policy and sustainability issues shaping the buffalo meat sector. He noted that several state-level animal preservation acts remain outdated and inconsistent with Article 48 of the Constitution, which calls for the scientific organization of agriculture and animal husbandry. Restrictions on buffalo slaughter, he argued, constrain productivity and economic efficiency. He recommended revising such acts to eliminate references to buffaloes, permitting slaughter of calves above one year of age, and empowering farmers to make culling decisions based on veterinary and economic criteria. Transport regulations under the Motor Vehicle Act (2015), which mandate 2 sq. meters per buffalo, and certain provisions of the PCA Slaughterhouse Rules (2001) were also criticized as impractical and misaligned with international norms. From a nutritional perspective, Dr. Kondaiah highlighted the tripling of global meat demand in the past five decades, with annual production now exceeding 350 million tonnes and projected to reach 373 million tonnes by 2030 and 452 million tonnes by 2050. Per capita consumption varies from 93 kg/year in Australia and 91 kg/year in the USA to only ~4 kg/year in India. He also referred to an APEDA-funded ICAR-NRC Meat study (2018), which confirmed that buffalo slaughter and exports do not compromise ecological balance. Efficient by-product utilization, scientific waste treatment, and robust certification systems ensure compliance with environmental and sanitary standards. Supporting data from livestock censuses indicated that India's animal population increased from 335.6 million in 1962 to 534.55 million in 2019, with steady gains in buffalo, goat, and sheep numbers. Linking these trends to global markets, Dr. Kondaiah noted that the processed meat industry was valued at US\$519.41 billion in 2019, projected to reach US\$862.97 billion by 2027 at a CAGR of 6.24%. Frozen meat dominates, followed by

chilled and canned products. With its large buffalo, goat, and poultry base, India is well placed to expand its share through value-added products.

INDIAN MEAT EXPORT SECTOR

Over Last Five Decades- A Story Of Growth And Resilience

Dr.N.KONDAIAH

Former Joint Commissioner (Meat & Meat Products- DAH-GOI)
Ex-HEAD- Livestock Products Technology-IVRI
Ex- Director- NRC Meat, Hyderabad
SCIENTIFIC ADVISOR- All India Buffalo & Sheep Meat Exporters Association

UPTO NOW...MEAT EXPORT SECTOR has done a GOOD Job But,
Way Forward- challenging to realize the potential & sustain growth



Dr. B. M. Naveena while giving opening remarks

Simplified example of a dairy farm illustrating annual flows of animals (dairy cows, replacement heifers and reared surplus calves) and product flows of energy corrected milk (ECM) and meat (carcass weight) (LEAP, 2016a)

CF: FAO, 2018. Water use of livestock production systems and supply chains – Guidelines for assessment (Draft for public review). Livestock Environmental Assessment and Performance (LEAP) Partnership, FAO, Rome, Italy

OUT put from 100 dairy cows in efficient system:

Calve born: 98less 5% mortality...

Milk production: 667 tonnes

Cull'd cows: 23.....cow beef: 7 tonnes Cwt.

Replacement heifers: 26

Veal calves: 10.....0.7 tonnes veal Cwt.

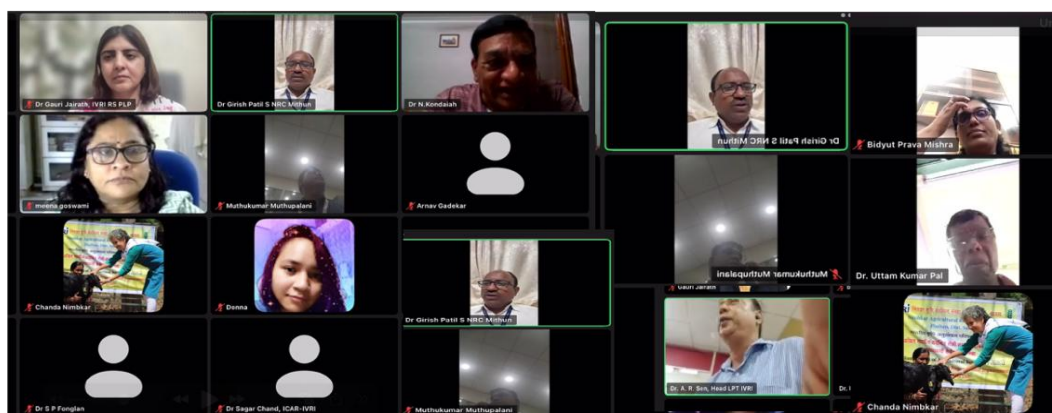
Dairy beef: 55..... 20 tonnes Cwt.

Steers(males): 40

Heifers: 15

Energy-corrected milk (ECM) determines the amount of energy in the milk based upon milk, fat and protein and adjusted to 3.5 percent fat and 3.2 percent protein.

Dr. N. Kondaiah giving presentation



Glimpses during interaction session after presentation

Following the lecture, Dr. M. Muthukumar conveyed his gratitude to Dr. N. Kondaiah, noting that the presentation comprehensively addressed the buffalo industry, beginning with the significance of meat within the livestock sector, its growing contribution to exports, and the assurance that slaughter practices do not compromise the sustainability of buffalo populations. He remarked that the audience was fortunate to benefit from such an enlightening and insightful discourse. Dr. Girish Patil commended the lecture and raised an important question regarding the limited engagement of private stakeholders in buffalo calf rearing. In response, Dr. Kondaiah acknowledged that while government schemes for calf rearing had been initiated, they often lacked rigorous monitoring and follow-up, which limited their impact. Dr. Uttam Kumar Pal expressed his appreciation, noting that the lecture provided both a realistic assessment of current challenges and a clear roadmap for the buffalo sector's future development.

Building on this, Dr. A. R. Sen referred to the potential of male and female buffalo calves discussed during the presentation. He shared insights from a recent *Viksit Bharat* program visit to three districts, where interactions with nearly 100 farmers revealed that many farmers do rear calves for up to three years before sale. Dr. Kondaiah confirmed that around five million calves are reared in this manner, but emphasized that the majority remain underutilized. He suggested that ICAR-IVRI could lead such efforts, while also documenting success stories to inform policy and practice. Dr. S. P. Fonglan extended his thanks, describing the lecture as exhaustive and valuable. Ms. Chanda Nimbkar added her appreciation, calling it among the most informative lectures she had attended. She highlighted the striking statistics presented, particularly the decline of cattle populations despite preservation acts, contrasted with the steady rise of buffalo populations despite ongoing slaughter.

In conclusion, Dr. M. Muthukumar delivered the formal vote of thanks, acknowledging Dr. Kondaiah's exhaustive and insightful lecture, and extending gratitude to IMSA chair holders, members, organizers, and participants for their active involvement, which ensured the success of the session.



(Gauri Jairath)
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