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NOURISH INDIA 2025

FOOD SAFETY
& SECURITY
LEADERSHIP
SUMMIT

**VIKSIT Bharat Through Innovation and
Exploring Opportunities in Food Safety and Security**



20 NOVEMBER 2025
10:00 AM ONWARDS

INDIA HABITAT CENTRE
NEW DELHI

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1. INTRODUCTION

India's food and agriculture ecosystem stands at a defining moment, shaped by rising consumer expectations, expanding global markets, evolving regulatory frameworks and the urgent need for scientific, sustainable and resilient value chains. In this context, The Bengal Chamber of Commerce & Industry (BCC&I), in collaboration with ICAR-NRC for Grapes and supported by the Ministry of Food Processing Industries (MoFPI), Government of India, convened the Nourish India 2025 – Food Safety & Security Leadership Summit in New Delhi. Conceived as a national platform, the Summit brought together regulators, scientific institutions, industry leaders, financial agencies, exporters, agri-input companies, start-ups and farmer-facing organisations to collectively examine the emerging challenges and opportunities that define India's food-safety and food-security landscape.

The Summit anchored its deliberations on four interconnected pillars: food safety leadership, regulatory alignment and safe input use, sectoral growth and export competitiveness, and ecosystem enablers including finance, infrastructure, Government schemes and trade policy. Across the sessions, speakers highlighted the increasing complexity of food systems, the necessity of harmonised standards, the role of technology and traceability, and the importance of micro-enterprise formalisation in strengthening India's agri-food economy. From Codex-aligned scientific frameworks and MRL compliance to cold-chain infrastructure, Clean Plant Programmes, Ministry of Food Processing Industries (MoFPI), Government of India schemes, National Bank For Agriculture And Rural Development (NABARD) financing and Agricultural and Processed Food Products Export Development Authority's (APEDA) digital traceability models, the Summit showcased the breadth of institutional mechanisms that contribute to a safe, modern and globally competitive food system.

Designed as both a knowledge-building and a solution-oriented forum, Nourish India 2025 provided participants with actionable insights on regulatory reforms, scientific best practices, production diversification, climate resilience, value-addition, responsible stewardship and the integration of biological and chemical inputs. With representation from across the value chain—from farm to fork—the Summit reaffirmed the collective commitment to advancing India's leadership in food safety, nutritional security and sustainable growth.

2. OBJECTIVE

Food Safety Leadership – Industry Insights & Best Practices

This theme showcases leadership-driven strategies from leading FMCG and food industry organisations, highlighting proven models in food safety, quality assurance, risk management and consumer trust-building. Discussions emphasise the operational and technological best practices that shape a safer and more reliable food ecosystem.

Enhancing Food Safety & Security – Role of Agri-Input Industry and Regulatory Ecosystem

This segment examines the critical role of agrochemicals, crop science innovations and regulatory bodies in ensuring safe agricultural inputs and compliance with global standards such as MRL norms, WTO-SPS requirements and AMR-related safeguards. The focus remains on fostering innovation, promoting responsible input use and strengthening regulatory harmonisation to support domestic and export-oriented value chains.

Unlocking Sectoral Opportunities – Boosting Domestic and Export Markets

This theme explores emerging opportunities across high-value commodities including tea, spices, horticulture produce, condiments, agri-commodities, processed foods and Basmati rice. It brings together industry leaders, policymakers and scientific institutions to identify pathways for domestic market expansion and enhanced export competitiveness through quality improvement, branding and market diversification.

Strengthening Ecosystems – Role of Financial Institutions, Infrastructure & Trade Policy

This objective focuses on the broader enablers of food safety and security—financial institutions, agri-infrastructure, logistics and trade policies. The discussions address investment avenues, risk mitigation mechanisms, supply-chain resilience and policy frameworks that reinforce a robust food system. Special emphasis is placed on government schemes, financial supports and subsidy-linked interventions supporting agriculture, horticulture and food processing sectors.

Government Schemes & Integrated Support for the Agri-Food Ecosystem

This objective highlights the extensive suite of Government of India schemes that underpin value-chain development—from production to processing, storage and exports. The focus includes flagship programmes such as **PMFME Scheme, PM Kisan SAMPADA, AIF, Operation Greens, Cold Chain & Cluster Development Schemes, Production-Linked Incentives, Clean Plant Programme (CPP)**, and sector-specific supports through **MoFPI, NABARD, APEDA and State Departments**. Together, these schemes enable access to credit, subsidies, incubation, testing infrastructure, market linkages and export facilitation, strengthening the competitiveness and safety of India's agri-food ecosystem.

3. INAUGURAL SESSION

Viksit Bharat through Innovation & Exploring Opportunities in Food Safety & Security

The Nourish India 2025 – Food Safety & Security Leadership Summit commenced with a distinguished gathering of industry leaders, scientific experts, policymakers, and senior representatives from India's food processing and agri-export ecosystem. The inaugural session brought together eminent voices to reflect on India's rapidly shifting food systems and the urgent need to integrate innovation, safety, and nutritional security into a unified national approach.

Micro-Entrepreneurs at the Core of Food Safety Dialogue: Mr. Subhodip Ghosh, Director General, The Bengal Chamber of Commerce & Industry

Mr. Ghosh opened the session by welcoming all dignitaries, experts, and participants who had travelled from across the country to join the deliberations. He reiterated BCC&I's legacy as India's oldest chamber of commerce and one of the very few institutions that has maintained equal emphasis on agriculture, horticulture, food processing and rural development alongside its traditional industrial focus.

He reflected on the Chamber's extensive work with micro-entrepreneurs and FPOs, especially through the large-scale initiative conducted in West Bengal in partnership with the State Bank of India. Through 10 district-level camps, more than 800 FPOs were trained on DPR preparation, credit linkage, and access to government schemes—efforts that have already resulted in substantial credit disbursements under the Agriculture Infrastructure Fund.

He emphasised that the true relevance of a summit on food safety and sustainability lies in the participation of micro-entrepreneurs themselves. "Without their presence, conversations on food safety and sustainability lose their meaning," he noted, underscoring that the Chamber intends to scale its capacity-building work nationally.

Mr. Ghosh concluded by expressing hope that the day's deliberations and the concurrent exhibition would enrich collective understanding and strengthen future collaborative efforts.



MR. SUBHODIP GHOSH
Director General
BCC&I

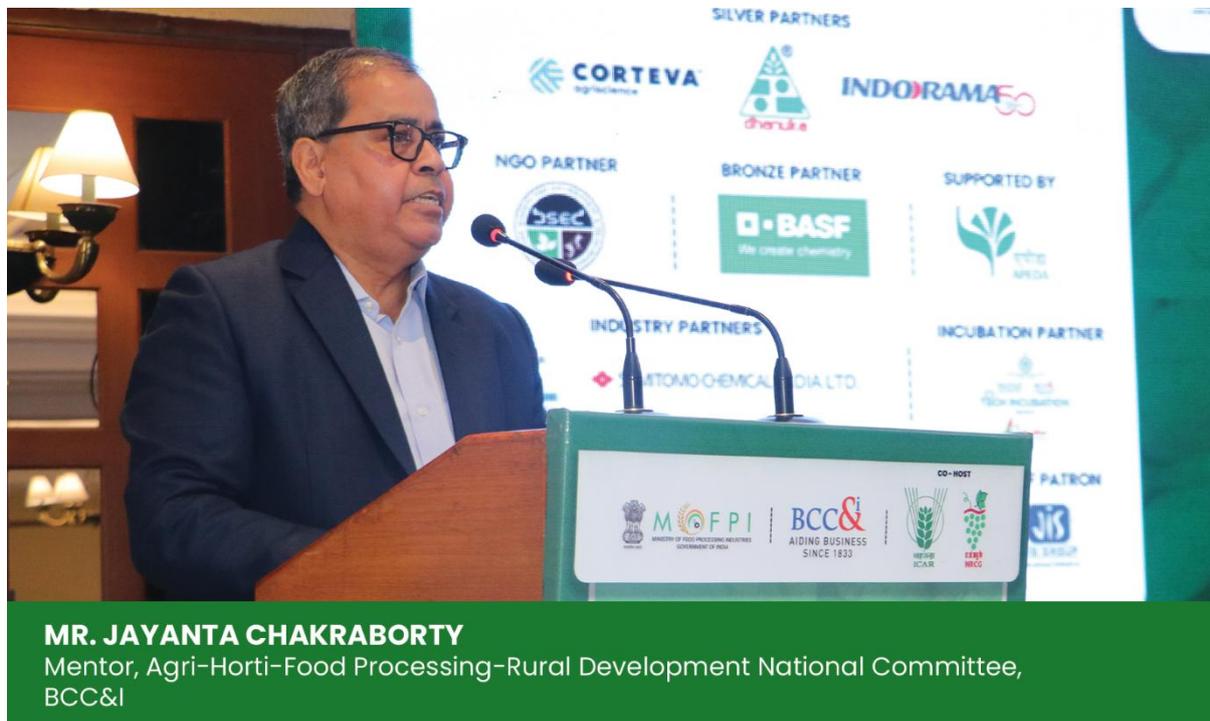
Integrating Food Safety, Security and Nutrition into One National Priority: Mr. Jayanta Chakraborty, Mentor, Agri-Horti-Food Processing-Rural Development National Committee, BCC&I

Mr. Chakraborty extended a formal welcome to the dignitaries and highlighted the conceptual foundation of the Summit-bringing together food safety, food security, and nutritional well-being under a single national agenda. He emphasised that India's agricultural progress can no longer be measured merely by production volumes but must be aligned with quality, traceability, and public health outcomes. He observed that India, as one of the world's largest producers and exporters of food commodities, stands at a pivotal moment.

“Food security ensures availability and access, but food safety ensures that what reaches the plate is compliant, nutritious and safe.”

Mr. Chakraborty explained that global markets are increasingly driven by standards, residue limits, transparent supply chains, and scientific compliance. Strengthening traceability, improving testing infrastructure, and harmonising standards are now fundamental for both domestic consumer protection and export competitiveness.

He urged that Nourish India 2025 become a platform that unifies production, processing, packaging and market systems under strong science-led frameworks. He noted that the true way forward lies in integrating food safety with sustainability, strengthening consumer awareness, and ensuring coordinated engagement across ministries, regulators, and industry.



Advancing India's Position in Premium and Value-Added Rice: Dr. Prem Garg, National President of Indian Rice Exporters Federation & Chairman of Shri Lal Mahal Group

Dr. Garg, representing one of India's largest agri-export sectors, shared insights into the global rice landscape and India's leadership in premium varieties such as basmati. He highlighted that India supplies over 40% of the world's basmati and exports more than 22 million tonnes of rice annually, valued at over USD 13 billion. He emphasised that the future of the rice sector lies in value, not just volume. Branding, premium packaging, diversification into healthier and low-GI rice varieties, and GI-based identity enhancement (such as Govinda Bhog and Tulaipanji from West Bengal) were identified as critical pathways for capturing higher global value.

He stressed that global buyers increasingly demand **traceability, pesticide compliance and sustainability**, which places a responsibility on exporters,

farmers, and institutions to adopt modern systems such as QR-based tracking and digital certification. Sustainable practices like Alternate Wetting and Drying (AWD), already being piloted by FPOs in Bengal, were cited as crucial for reducing water use and emissions.

Dr. Garg reaffirmed IREF's commitment to working with Agricultural and Processed Food Products Export Development Authority (APEDA), laboratories, state agencies and global partners to enhance India's position as the most trusted global source of premium rice varieties.



Strengthening India's Food Safety Through Science and Technology: Dr. Giridhar Parvatham, Director, CSIR-Central Food Technological Research Institute

Dr. Parvatham spoke on the evolving global landscape of food safety and the scientific leadership required to support this transition. He emphasised that protecting public health and building consumer trust demand robust organisational cultures, upgraded technologies and continuous capacity-building across the value chain.

He highlighted the growing significance of AI, machine learning, blockchain, IoT-enabled traceability, nano biosensors, and virtual modelling for safety compliance, rapid detection of contaminants, and cold-chain monitoring. While advanced tools

exist in multinational environments, he noted that India must work towards enabling similar capacities among mid- and small-scale food businesses.

A critical challenge he addressed was India's dependence on imported **Certified Reference Materials (CRMs)** for testing. Developing Indian CRMs, suited to local commodities and contaminants, is essential to reduce costs, improve accuracy and strengthen domestic laboratories. He noted ongoing discussions between CSIR, FSSAI and the Ministry of Science & Technology to scale indigenous CRM development.

Dr. Parvatham concluded with an appeal for the Summit to drive meaningful and actionable pathways for strengthening food safety systems across India.



Advancing Standards, Compliance and Science-Based Regulation: Dr. Alka Rao, Advisor, Food Safety and Standards Authority of India (FSSAI)

Dr. Rao delivered a comprehensive address outlining FSSAI's regulatory philosophy, international engagements and science-driven approach to standard setting. She explained that FSSAI's mandate aligns India's domestic regulations with global best practices while keeping national health priorities at the forefront. She elaborated on FSSAI's structured, multi-level stakeholder engagement process—scientific panels, sectoral consultations, regional meetings and national forums—ensuring

that regulations evolve through evidence, dialogue and transparency. She highlighted that more than 280 experts from over 80 organisations contribute to FSSAI's scientific deliberations.

Dr. Rao showcased India's leadership at the **Codex Alimentarius Commission**, including India's pioneering work in establishing realistic field-based MRLs for spices and developing new international codes of practice on CRM reuse-an important achievement for resource-constrained countries. She also highlighted India's progressive regulatory provisions on infant food labelling, recycled PET for food-contact materials, and enabling QR-based traceability systems. **"Our standards are at par with global regulations, and in some areas, more advanced."**

Responding to field-level concerns raised on traceability in tea exports, she reiterated that Food Safety and Standards Authority of India (FSSAI) already provide enabling frameworks for QR and digital systems and that full effectiveness requires coordinated adoption across the sector.



DR ALKA RAO
Advisor,
Food Safety and Standards Authority of India (FSSAI)

Building Trust, Compliance and Capacity in India's Food Processing Sector: Dr. J. P. Dongre, Director & DAMA, Ministry of Food Processing Industries

Dr. Dongre emphasised that India's food processing sector holds immense potential but must build sustainability, scientific compliance, and consumer trust to achieve the Prime Minister's vision of ensuring that every global dining table contains at least one Indian food product.

He identified **micro-entrepreneurs** as a crucial segment requiring targeted support on food safety implementation and compliance. He acknowledged the challenges they face—testing costs, regulatory understanding, traceability, documentation—and stressed that the Ministry is actively designing schemes to strengthen micro-units and ensure safer processed foods.

Dr. Dongre highlighted that processed foods, when backed by scientific standards, extend shelf life, support fortification (critical for nutritional security), and enhance export opportunities. He emphasised the need to counter misinformation and “negative narratives” around processed foods by communicating scientific facts and labelling accuracy—especially regarding added sugars, inherent sugars, and nutritional composition.

He noted that technologies such as AI, blockchain and IoT will be central to positioning India's processed foods competitively in global markets. He concluded by congratulating the organisers for creating a platform that brings all stakeholders together.



Strengthening Traceability and Expanding Agri-Export Ecosystems: Dr. Sudhanshu, Secretary, Agricultural and Processed Food Products Export Development Authority (APEDA)

Dr. Sudhanshu commended BCC&I and NRC for organising a timely summit and spoke extensively on India's agricultural diversity and its natural strength in forming commodity clusters. From Alphonso in Maharashtra to Himsagar in Bengal, from raisins to potatoes, India's regional strength forms the backbone of both domestic and export value chains.

He highlighted that safe food for exports must go together with safe food for domestic consumers. The success of India's pioneering traceability system for grapes—developed during a crisis in 2006–07—was presented as a model now replicated across peanuts, organic foods and other categories. Since its implementation, there have been **zero global complaints** against Indian grapes, demonstrating the power of digital traceability.

He described Agricultural and Processed Food Products Export Development Authority's (APEDA) recent initiative to identify and support 100 agri-startups across product innovation, SPS challenges and technology-based solutions. Over 600 applications were received, and the selected startups will be supported through incubation and investor engagement. Dr. Sudhanshu called for deeper

collaboration among farmers, processors, ministries, laboratories, state agencies and exporters to collectively fulfil the vision of “Nourish India”.



DR. SUDHANSHU

Secretary,
Agricultural and Processed Food Products Export Development Authority (APEDA)

4.EXCLUSIVE SESSION 1

Strengthening Value Chains Through Integrated MoFPI Support Frameworks: Dr. J. P. Dongre, Director & DAMA, Ministry of Food Processing Industries (MoFPI), Government of India

Dr. J. P. Dongre opened the exclusive session with a practitioner's overview of the physical and financial architecture required to make food processing viable, safe and export-ready - from farm-gate collection to cold-chain distribution and last-mile refrigerated transport. He framed the ministry's interventions as an integrated response to the whole value chain: collection, primary processing, cold storage, aggregation, refrigerated transport and market distribution. *"From zero to four degrees at collection through distribution - that integrated chain is the requirement for perishable success,"* he emphasised.

Dr. Dongre explained Ministry of Food Processing Industries' (MoFPI) Government of India financial support in concrete terms. For family-level and farm-gate infrastructure (sorting, grading, controlled-atmosphere cold stores, ripening chambers, packing lines, refrigerated vehicles, solar-powered cold rooms and paperless temperature-controlled solutions), the ministry offers grant assistance up to **INR 1,00,00,000** - typically **35% of project cost** (rising to **50%** in difficult or specified areas). For value-addition processing units the support ceiling can be **50% of project cost** (and **75%** in difficult areas), recognising the higher capex required for processing lines.

He flagged irradiation as an important technology for shelf-life extension: MoFPI provides up to **INR 1,00,00,000** support for irradiation facilities (same 35%/50% split depending on location). This, he noted, allows storage and trade of high value produce without chemical preservatives and can increase shelf life from months to a year.

Dr. Dongre spoke at length about **cluster and common-infrastructure** financing. To develop modern food-processing clusters (mini food parks/industrial plots with roads, drainage, power, effluent treatment and common facilities) the ministry provides grant support up to **INR 10,00,00,000** for the enabling infrastructure. For creation of processing units within a cluster (minimum five units), additional unit-level incentives are available - enabling packages can reach up to **INR 25-35 crore** per cluster depending on the model. He emphasised that eligibility spans public institutions, state agencies, HPCs, PSUs, NGOs, FPOs and private entities - provided

the mandated minimum number of processing units is established within the cluster.

The **Operation Greens**-style integrated model was presented as another instrument to scale horticulture value chains. Originally limited to tomato, onion and potato, MoFPI now envisages a broader, commodity-agnostic cluster approach for integrated value-chain development. Support under this scheme can be up to **INR 15,00,00,000**, with grant ratios of **35%/50%** depending on location; eligible activities include collection centres, primary processing, cold chain, aggregation, marketing outlets and allied services.

Recognising that testing and certification are central to market access, Dr. Dongre announced the ministry's support for **food-testing laboratory networks** - grants for procurement of high-end analytical equipment (LC, mass spectrometers, etc.). For private labs the ministry funds **50% of equipment costs** (capped as per scheme); for government or academic labs the assistance can be **100%**. This push is intended to strengthen domestic testing capacity and reduce reliance on expensive foreign reference materials.

A substantial portion of the address focused on the **Pradhan Mantri Formalisation of Micro Food Processing Enterprises (PMFME)** Scheme - MoFPI's flagship instrument for micro-level formalisation and upgradation. Dr. Dongre outlined the scheme's rationale and operational mechanics:

- **Objective and scale:** PMFME Scheme seeks to formalise and strengthen micro food processors (estimates suggested ~22 lakh micro units currently) through structured support for technology upgradation, capital access, common facilities, branding and market linkages. The scheme's financial outlay and beneficiary targets were revisited since launch: technical, business and financial handholding for up to 2,00,000 micro-enterprises under the scheme.
- **Credit-linked subsidy:** For individual micro units the scheme provides a **35% credit-linked subsidy** on eligible project cost (ceiling subsidy of **INR 1,00,000**), with a minimum promoter contribution of 10%. The subsidy is paid into a mirror account and ultimately adjusted against the bank loan; the process is fully digital.
- **Common infrastructure:** Larger common facilities (multi-product incubation / processing centres) receive **35% subsidy** up to a ceiling (example cited: **INR 3,00,00,000** for specified common infrastructure).

Government-run facilities may receive higher levels of funding (up to full support in specified cases).

- **Seed-capital to SHGs:** For livelihood-based collectives, the scheme provides **direct seed capital** grants to each member (scheme example: **INR 40,000 per SHG member**) to enable purchase of small tools and working capital.
- **Capacity building & DPR generation:** MoFPI has institutionalised a layered capacity-building approach - from product-specific training modules and entrepreneur development programmes to training-of-trainers and district resource persons (DRPs). The PMFME Scheme portal auto-generates DPRs from user inputs; DRPs support applicants end-to-end and help interface with banks and State Nodal Agencies (SNAs).
- **Branding & marketing:** The scheme supports collective branding and market promotion (50% assistance toward prescribed project limits). MoFPI subsidises participation in major trade events (for example, World Food India) to showcase microentrepreneurs, many times providing stall space free or at subsidised cost. Export market entry support - including branding, packaging and reimbursing a portion of listing/slot costs on global retail platforms - forms part of the incentives for scaling firms.
- **Digital, streamlined process:** The PMFME Scheme application is fully online; applicants can nominate two banks to ensure faster approvals and disbursements. Once sanctioned, subsidy flows are routed through the mirror account mechanism. To date the scheme has supported a large number of beneficiaries (figures cited in the address exceeded **1.64 lakh** assisted).

Dr. Dongre concluded by underlining the ministry's focus on **product diversification, employment generation, and export promotion** - naming targeted sectors such as ready-to-eat / ready-to-cook, processed marine products and dairy value-add (notably mozzarella using India's buffalo milk advantage). He highlighted the **production-linked incentives and export incentives** for larger processors (performance incentives linked to year-on-year incremental exports and marketing grants to subsidise shelf space and promotional spends in international retail chains).

Practical details, helplines and implementation notes were provided: the PMFME Scheme portal is live, and the process designed to be applicant-friendly; district resource persons and State Nodal Agencies will actively support field applicants; banks are integrated as lending partners; and the ministry also curates branding, market-linkage platforms and trade exposure for beneficiaries.

- *“This complete chain – from collection, refrigerated storage, processing to distribution – is what we call integrated. The ministry is providing grant support to make that chain viable.”*
- *“For micro units, formalisation through PMFME will ensure access to credit, modern machinery, training and market linkages. The DPR generation and online portal make the process simple for applicants.”*

Practical guidance given to attendees

- Use the PMFME Scheme portal for online submission and DPR auto-generation; reach out to DRPs and SNAs for handholding.
- Explore cluster funding for shared common infrastructure rather than isolated unit investment where scale and logistics allow.
- Leverage ministry support for lab equipment and testing networks to reduce compliance costs and improve export credibility.
- Consider irradiation and modern cold-chain options where shelf-life extension and international market access are priorities.
- For branding and export entry, submit collaborative proposals (brand consortia) for greater funding coverage.

Next steps mentioned

A MoFPI technical team will host a separate, more detailed Q&A and scheme-application workshop for entrepreneurs and FPOs (follow-up sessions and contact details were shared). Subsequent sessions at the Summit were planned for deeper technical engagement on schemes, and the MoFPI team invited interested entities to apply and request DRP support through the portal.



DR. J. P. DONGRE
Director & DAMA,
Ministry of Food Processing Industries (MoFPI), Government of India



MR. VIBHOR SHARMA
Ministry of Food Processing Industries (MoFPI), Government of India

5. EXCLUSIVE SESSION 2

Strengthening Ecosystems – Leveraging Institutional Finance for Food Safety & Security: Vishal Sharma. DGM, National Bank For Agriculture And Rural Development (NABARD) Delhi

The session on strengthening food safety and security ecosystems through financial institutions was addressed by **Shri Vishal Sharma**, Deputy General Manager, National Bank for Agriculture and Rural Development (NABARD), who brought a practitioner's perspective on how institutional finance underpins access, availability, and affordability of food—the three pillars of food security.

Speaking with characteristic brevity and clarity, Shri Sharma noted that while MoFPI had already elaborated on sector-specific incentives, the foundational role of financial institutions in enabling food processing deserves equal attention. He emphasised that food processing serves as the crucial bridge between agricultural production and consumer markets and therefore becomes an indispensable platform for achieving national food safety and security outcomes.

Shri Sharma contextualised India's food processing sector in terms of its present growth trajectory and the larger Atmanirbhar Bharat vision. The sector is already expanding at over 5%, and the national aspiration is to reach significantly higher annual growth rates to support employment, value addition and improved farmer incomes. He explained that food processing can broadly be understood in three functional stages—storage, primary processing (sorting, grading, cleaning), and secondary processing through value addition. At each stage, financial institutions have critical roles in capital formation and credit facilitation.

He briefly outlined NABARD's mandate and functions, describing it as a sector enabler across agriculture, rural development and allied domains. NABARD provides both **short-term refinance** (primarily for working capital and crop loans, including KCC) and **long-term refinance** for capital formation in agriculture and food processing. A major digital initiative highlighted was the **digital KCC portal**, enabling farmers to submit applications and receive in-principle bank sanctions without visiting branches. NABARD is also collaborating on the **Jansamarth platform**, strengthening warehouse receipt ecosystems and digital credit systems. Shri Sharma described NABARD's curated refinance schemes for priority segments, including micro food processing, where banks receive additional liquidity support to expand credit. He explained the **Food Processing Fund**, under which the Ministry

of Food Processing Industries has placed a dedicated corpus with NABARD for long-term lending to mega food parks, agro-processing clusters and integrated food parks. The Fund has already assisted mega food parks, agro-processing clusters and integrated projects across several states, and entrepreneurs intending to set up such infrastructure can directly approach NABARD for term finance.

Touching upon infrastructure creation, he highlighted that NABARD finances a wide spectrum of rural and agri-logistics infrastructure—including roads, warehousing, aggregation points and rural connectivity—through funds such as the **Rural Infrastructure Development Fund (RIDF)** and the **NABARD Infrastructure Development Fund**. He mentioned the **Warehouse Infrastructure Fund**, and pointed to the **Kisan Bhandaran App**, a digital platform hosting more than one lakh geo-tagged storage structures to help farmers and traders locate nearby warehouses for scientific storage.

He further explained NABARD's role in administering and supporting government schemes across dairy, fisheries and animal husbandry through the **Animal Husbandry Infrastructure Development Fund (AHIDF)** and the **Fisheries Infrastructure Development Fund (FIDF)**. In addition, NABARD operates **credit guarantee systems** through its subsidiary NABSANRAKSHAN, offering collateral-free credit access to FPOs and entrepreneurs who lack security to obtain loans from banks.

Shri Sharma highlighted NABARD's deep engagement with **Farmer Producer Organisations (FPOs)**. From its early Producer Organisation Development Fund to the ongoing **10,000 FPO Formation Scheme**, National Bank For Agriculture And Rural Development (NABARD) continues to act as a major implementing agency and capacity-builder. He also referred to the **post-harvest mechanisation and storage initiative** in partnership with the National Level Committee for Cooperatives, targeting the creation of one lakh on-farm storage structures across India.

Throughout his address, Shri Sharma urged entrepreneurs to fully leverage NABARD's refinance facilities, infrastructure funds, credit guarantees and digital tools, noting that many of these interventions indirectly strengthen food safety by improving supply chain transparency, reducing wastage, enabling scientific storage, and promoting formalisation in the processing sector. His intervention underscored the importance of financial systems in enabling the broader aspirations of Nourish India 2025.



SHRI VISHAL SHARMA

DGM,

National Bank For Agriculture And Rural Development (NABARD) Delhi

6. PANEL DISCUSSION 1:

Food Safety Leadership – Industry Insights & Best Practices

Panellists:

- Mr. Sitanshu Sekhar Bag (Associate VP – Operations, Emami Agrotech Ltd)
- Dr. R. K. Pal (Former Director, ICAR–NRC on Pomegranate; Chairman, FSSAI Scientific Panel)
- Dr. Vandana Tripathi (Coordinator, All India Network Project on Pesticide Residues)
- Mr. Arjun Dutta (Founder, Greenlife IQ Ponics)

Moderator: Dr. Giridhar Parvatham, Director, CSIR–Central Food Technological Research Institute

The first technical session set a practical, evidence-led tone for the day – bringing together industry operators, research scientists and agri-tech entrepreneurs to discuss how leadership, technology and on-the-ground best practices can tighten food safety across India’s increasingly complex supply chains. Dr. Giridhar Parvatham opened by framing the problem: rising consumer expectations, more intricate global value chains, and the growing centrality of traceability, predictive monitoring and scientific compliance to keep Indian products competitive abroad.

Industry Leadership at the Centre of Food Safety Transformation

The panel opened with **Dr. Giridhar Parvatham** setting the scene: India stands at a pivotal juncture where food safety, nutritional security and consumer trust must advance in tandem. He described how food systems have grown more complex, global supply chains more exposed and consumer expectations more exacting and framed the session around the role of industry leadership, technology, traceability and innovation in shaping a safer, more nutritious and trustworthy Indian food basket. With panelists who actively participate in Codex and other standards forums, the moderator invited each speaker to share practical insights and sectoral experience that could guide both industry practice and public policy.



Strengthening pesticide-residue monitoring through national laboratory networks

Dr. Vandana Tripathi outlined the scale, structure and purpose of India's pesticide-residue monitoring effort and emphasised the trade-health interface of residue issues. As coordinator of the All-India Network Project on Pesticide Residues at ICAR, she described a national-level monitoring project spanning 35 laboratories across ministries and departments and stressed that residue concerns affect domestic consumers and export competitiveness alike. Dr. Tripathi explained that MRL fixation has both food-safety and trade dimensions: India follows international procedures in setting MRLs, but practical challenges arise around data generation and the commercial incentives that determine which residues are prioritised. She argued for scientific, occurrence-based approaches where appropriate, and noted that India has generated and used domestic data to secure more realistic international limits in specific cases - demonstrating the value of Indian field data in global standards discussions.



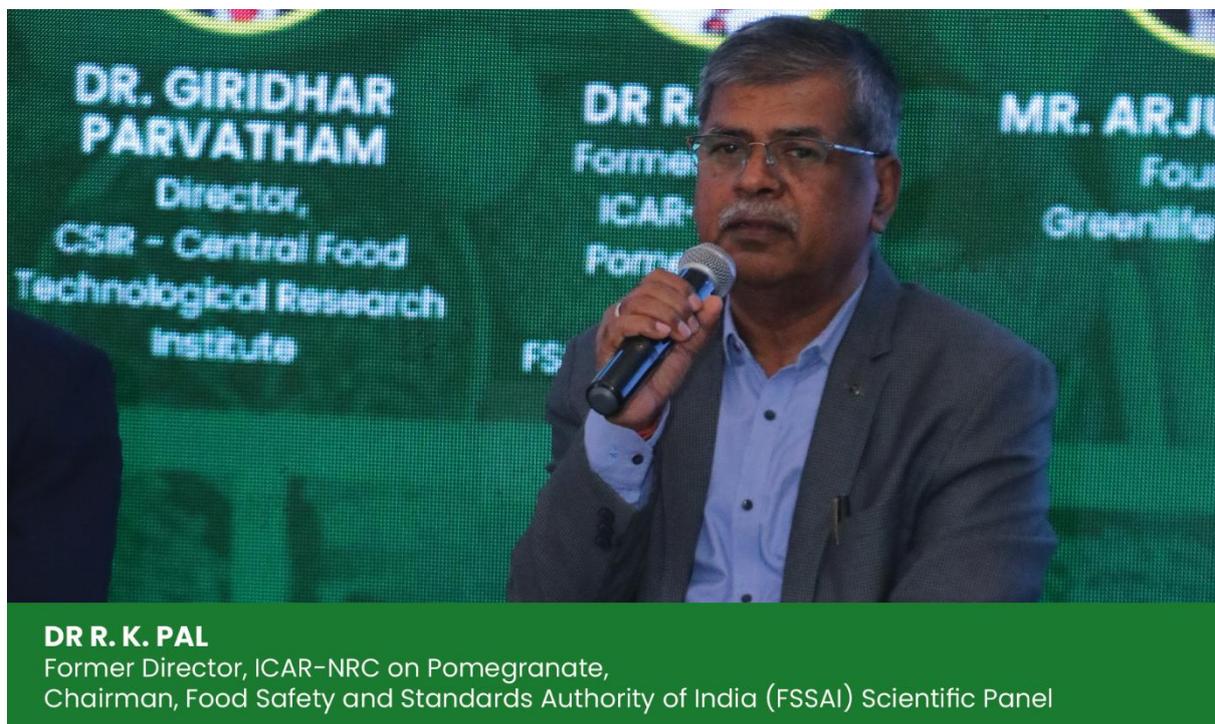
Value-chain optimisation and “total utilisation” for safety, sustainability and value creation

Drawing on decades in horticultural research, **Dr. R. K. Pal** emphasised two linked themes: (a) the need for integrated pest and disease management at farm level to reduce pesticide dependence, and (b) the enormous opportunity in total utilisation - converting peel, seed and processing co-products into high-value ingredients (natural colours, nutraceutical extracts, seed oils). He used pomegranate as a case study: peel and seed fractions that are currently waste contain punicalagins and seed oil with documented health benefits and industrial applications.

His points for industry:

- Adoption of validated minimal-processing and post-harvest treatments can preserve internal fruit quality and reduce post-harvest loss.
- Scaling technologies to stabilise fresh arils and extract high-value fractions creates new revenue streams and lowers pressure on primary commodity margins.
- Total-utilisation reduces waste, strengthens traceability (by accounting for full biomass) and creates value that can finance safer practices upstream.

“When you convert waste into value, you create the economic room to pay for safer inputs and better post-harvest handling.”



Industry perspective: quality systems, digital monitoring and audit discipline

Representing industry practice and operations, **Mr. Sitanshu Sekhar Bag** reflected on lessons from decades in food manufacturing and emphasised systems, standards and digital monitoring as the pillars of brand trust. He argued that quality must be the foundation of any brand promise, and that policy and standards should align with global norms. Mr. Bag urged companies to move away from manual record-keeping to digital data capture and automated monitoring – giving the example of temperature loggers in cold rooms to prevent unnoticed deviations that can compromise safety. He advocated regular internal and external audits, structured risk assessments across processing steps, and stronger measures such as non-erasable batch coding on packs to curb fraudulent relabelling. His message was practical and operational: build robust compliance mechanisms and digital traceability so that quality becomes a consistent, demonstrable outcome rather than a periodic claim.

Practical recommendations he advanced:

- Replace manual record-keeping with simple data-loggers and cloud records for critical CCPs (temperature, humidity, etc.).

- Institutionalise internal audit cycles and independent third-party verification to sustain brand trust.
- Invest in operator training so frontline workers understand process risks and corrective actions.



MR. SITANSHU SEKHAR BAG
Associate Vice President Operations,
Emami Agrotech Ltd

Agri-tech entrepreneur: traceability, farm digitisation and market linkages

Mr. Arjun Dutta brought an entrepreneurship and tech-centric perspective, describing how farm digitisation, traceability and AI-driven decision tools can change the economics and compliance of fresh and processed foods. He narrated the evolution of his enterprise from a college project to a revenue-generating agri-tech business and highlighted concrete solutions: farm-level digitisation for disease prediction, end-to-end supply-chain traceability starting from seed and farm inputs, QR- or blockchain-linked batch codes that carry geo-climatic and production metadata, and tools that connect farmers to markets. Mr. Dutta argued that such technologies are enablers for organic and specialty produce - allowing producers to meet export-quality expectations and giving buyers the provenance data they now demand - while acknowledging that market linkage remains the core challenge for many producers.

Across the discussion the panel repeatedly returned to two cross-cutting threads: first, the need to back standards and regulations with science-driven data and

targeted stakeholder engagement; and second, the role of technology and extension in translating standards into farm-level practice. Panellists noted that Codex and national forums offer platforms to harmonise standards, but that ground realities - farmer practices, regional pest pressures and post-harvest handling - determine whether consignments meet those standards. Speakers highlighted success stories where domestic occurrence data and coordinated action produced realistic limits or avoided trade rejections, while also pointing to the continuing gaps in farmer awareness and adoption of GAP and IPM that lead to residue variability.

In closing, the moderator Dr. Giridhar Parvatham synthesised the session into a call for three integrated priorities: strengthen field-to-lab linkages so monitoring is representative and responsive; accelerate digital traceability and automation to make compliance auditable and transparent; and invest in capacity building - from plant operators to quality leaders - so India can balance clean-label and sustainability demands without compromising product integrity. The session ended with thanks to the panellists and a reminder that combining scientific rigour, technology adoption and industry stewardship remains central to delivering safe, nutritious and globally competitive food from India.



Cross-cutting discussion – MRLs, consumer communication and balance between cost & compliance

The panel converged on several shared observations during discussion with the moderator and audience:

- **MRL setting and global trade.** Panelists underscored the importance of India's evidence-based approach to MRLs (field occurrence data) and active engagement in Codex to avoid unfair trade disruptions. India's recent success in proposing MRLs based on national data was cited as a positive precedent.
- **Cost vs compliance.** Industry and researchers recognised the tension between cost pressures and the need to meet stricter residue and processing standards; solutions include technology adoption, cluster-level common facilities and public grants/subsidies to de-risk capital investment for SMEs.
- **Consumer trust & labelling.** Clear, science-based labelling and consumer education (guided by FSSAI) were flagged as essential to prevent misinformation and to make safety a market differentiator.

Conclusion:

The session underscored that India's food-safety and export readiness hinges on stronger science, wider digital adoption and improved field-level practices. Expanding laboratory capacity, harmonising test methods and developing indigenous CRMs are essential for reliable and comparable residue data. Cluster-based traceability, total-utilisation models and digitised monitoring systems emerged as practical enablers for affordable compliance and reduced wastage. Panelists agreed that meaningful progress also depends on robust capacity building—particularly in pesticide-smart IPM and operator training—to ensure safe production from farm to processing. Collectively, the recommendations provide a clear roadmap for strengthening India's food-safety ecosystem and enhancing competitiveness in both domestic and global markets.



PANEL 1

“Food Safety Leadership – Industry Insights & Best Practices.”

7. PANEL DISCUSSION 2:

Enhancing Food Safety & Security – Role of Agri-Input Industry and Regulatory Ecosystem

Panellists:

- Mr. Kamal Kumar (Advisor to Chairman, Dhanuka Agritech)
- Dr. Shekhar Varshney (South Asia Regulatory & Stewardship Leader, Corteva Agriscience)
- Dr. Amitava Sanyal (VP – Registration & Regulatory Affairs, Sumitomo Chemical India Pvt Ltd)
- Mr. Dileep Kumar Singh (Chief Marketing Officer, Indorama India Pvt Ltd)
- Dr. Sonai Rajan (Assistant Director, CIB&RC)
- Mr. Yuvraj Chopra (Country Advocacy Lead – Ag Solutions, BASF)
- Mr. Rahul Mathur (Head – National Marketing & Commercial Business, IPL Biologicals Ltd)

Moderator: Dr. Sujoy Saha, Principal Scientist (Plant Pathology), ICAR–National Research Centre for Grapes

The second panel convened experts representing agri-input multinationals, domestic manufacturers, biological innovators and India's apex pesticide regulatory body to examine how agri-inputs, regulation and stewardship intersect with national goals of food safety and food security.

Integrating Inputs, Regulation and Climate Challenges for National Food Security

Dr. Sujoy Saha opened the discussion by situating India's agri-input ecosystem within the larger arc of food security—from the country's PL-480 dependence to the scientific breakthroughs that today sustain self-sufficiency. He emphasised that climate change, newly emerging pest complexes, evolving global residue norms and enhanced consumer expectations are reshaping India's food-safety landscape. Given these shifts, he underscored the responsibility of input manufacturers, regulators and extension systems to drive innovation that is responsible, residue-compliant and aligned with international standards. He framed the panel as an exploration of how fertilisers, pesticides, biologicals, regulatory systems and stewardship practices collectively influence food-chain safety and national food security.



Climate change, resilient crops and balanced nutrition

Opening the panel, **Mr. Dileep Kumar Singh** of Indorama noted that climate variability has become one of the most defining disruptions to agricultural productivity. He pointed out that India has been witnessing unusual rainfall behaviour, temperature fluctuations and extreme weather conditions, with more than 230 such events in 2022 compared to around 190 earlier. These conditions directly affect crop survival and yields, with a one-degree rise in temperature potentially reducing yield by 6%. Citing the severe losses observed in regions like Haryana, he emphasised that climate change will remain a permanent phenomenon and requires continuous scientific and technological responses. He credited Indian scientists for developing climate-resilient varieties—such as flood-tolerant rice—that helped India reach a record production of 332 million tonnes even under unpredictable weather. He emphasised the importance of balanced fertiliser management and crop-specific nutrient practices as direct contributions from the fertiliser industry to help crops withstand stress while sustaining the nation's food output.

Despite systemic challenges, he reiterated confidence in India's capacity to sustain food security.

"The solutions lie within us—nutrition, resilience and better agronomy can offset many of the climate-linked risks."



Food security through regulation, productivity and scientific stewardship

Building on the theme, **Dr. Shekhar Varshney** of Corteva Agri science discussed how food security and food safety must be viewed together, especially in a country where self-sufficiency in food grains can mask productivity gaps. He noted that while India ranks second globally in rice production, in terms of productivity per hectare India falls far behind many countries. Similar gaps exist across cotton, soybean and several other crops. This demonstrates the urgent need for science-backed productivity enhancement and responsible use of crop protection inputs. He drew attention to the key role of regulatory institutions – the Central Insecticides Board & Registration Committee (CIB&RC) and the Food Safety and Standards Authority of India (FSSAI). He highlighted India’s renewed election to the Codex Executive Committee for Asia and the increasing recognition of India’s contributions within Codex Committees on fruits and vegetables, spices and analytical methods. At the same time, he recalled that 31% of global agri-trade issues relate to pesticide residue compliance, pointing to the need for scientifically set MRLs, proper GAP implementation and coordinated action among industry, regulators and the scientific community.



Regulation as the backbone of food-chain safety

Representing the regulatory perspective, **Dr. Sonai Rajan** of CIB&RC explained the structural and functional split between the Central Insecticides Board (CIB) and the Registration Committee (RC). He clarified that while CIB advises the Central and State Governments on the safe manufacture, sale, transport and distribution of insecticides, the RC scientifically evaluates dossiers—including toxicology, efficacy, chemistry and residue data—to determine whether a pesticide can be registered. He emphasised that although pesticides are inherently toxic, India has regulated them through the Insecticides Act (1968) and Rules (1971) for decades, primarily to protect human health, animals and the environment. He outlined how CIB&RC ensures the availability of quality and safe pesticides to farmers, including approving fungicides for aflatoxin control and other contaminants that can spoil food. Regarding delays in registration, he noted that CIB&RC today issues certificates promptly once dossiers are complete, and most delays occur because data submitted do not align with prescribed guidelines. He elaborated on ongoing efforts such as digitalisation through the CROP portal, transparency in application tracking, weekly issuance of import permits and the impending introduction of crop grouping—which will simplify and accelerate registration for minor crops. He stressed that newer molecules, including nano-pesticides and novel chemistries, are already prioritised for faster processing.

He stressed that delays often occur due to incomplete data submissions:

“When dossiers conform to guidelines, registrations do not delay.”



Integrated crop protection and the role of biologicals

Turning to integrated approaches, **Mr. Rahul Mathur** of IPL Biologicals highlighted the complementarity of biological and chemical solutions. He pointed out that farmers often misinterpret biologicals as a push towards “zero-chemical farming,” which is neither practical nor advisable for consistent yields. Instead, he emphasised that biologicals should be integrated into pest and disease management to reduce chemical dependence, delay resistance development and lower residues, benefitting both farmers and consumers. Sharing field examples from projects done with ICAR institutions, he described how farmers who previously applied 50 to 70 chemical sprays were able to reduce this to 15 to 20 by combining biological and chemical interventions—without compromising yield or quality. He highlighted that biological products also help prevent resurgence and resistance, and when farmers adopt integrated pest management at scale, they gain long-term sustainability and improved profitability while maintaining residue compliance.

He called for a mindset shift:

“Biologicals are not about going zero-chemical overnight. They are about balance-profitability for farmers, sustainability for markets and traceability for exports.”



Global residue standards, EU trends and export challenges

Addressing international regulatory pressure, **Dr. Amitava Sanyal** of Sumitomo Chemicals discussed the increasing challenges posed by stringent European Union regulations. He recalled past experiences where EU abruptly attempted to remove critical molecules like mancozeb, which was strongly resisted by global industry bodies and regulators given its essential role in Indian crop protection. He explained how EU deregistration of molecules automatically pushes their MRLs to default levels (0.01 ppm), which makes compliance nearly impossible for exporting countries and directly affects India’s export competitiveness. He highlighted structural differences in approval systems across countries and reiterated that India must adopt practical, scientifically based registration routes—especially for minor crops—so that farmers are not forced to use unapproved products out of necessity. He added that high cost and long duration of generating crop-specific data is a major bottleneck, referencing examples where label claims can take five years and significant investment.



Extension, stewardship and closing the lab-to-land gap

Providing a historical and extension-oriented perspective, **Mr. Kamal Kumar** of Dhanuka Agritech strongly emphasised that the collapse of the classical extension system remains one of India's biggest challenges. He recalled past instances where scientific extension—such as the model Public-Private Partnership soybean project in Hoshangabad—successfully raised yields by nearly 30%. He argued that the disconnect between research recommendations and actual field adoption leads to misuse of pesticides, improper dosage, and overuse of outdated chemistries. He stressed that India's 800+ Krishi Vigyan Kendras (KVKs) must play a more active, scientific role in technology dissemination. He also pointed out that modern chemistries—safer and more target-specific—must replace older, environmentally persistent molecules, and that industry and government must collaborate to ensure that training, demonstrations and directional spray practices reach farmers effectively.



Stewardship, innovation and farmer safety

From a stewardship and corporate perspective, **Mr. Yuvraj Chopra** of BASF outlined the organisation's extensive footprint across Indian agriculture and its commitment to sustainability and safe use. He presented an overview of BASF's long-standing presence in India, its diversified activities across chemicals, manufacturing, R&D and agricultural inputs, and its investments in world-class facilities. He highlighted farmer-safety training as a key component of their stewardship programmes, including training 820,000 farmers in safe pesticide use, sensitising women farmers, working closely with agricultural extension departments and distributing personal protective equipment. He also noted the company's collaboration with medical institutions to train healthcare providers in managing accidental agrochemical poisoning. He explained that alongside these efforts, BASF continues to introduce low-dose and safer chemistries supported by stewardship initiatives so that farmers adopt them responsibly.

The session concluded with concise reflections from the panel, each reiterating the shared responsibility of industry, regulators, scientists and extension machinery in securing both food production and food safety. The panel agreed that integrated solutions, timely regulatory reforms, scientific extension and balanced use of biological and chemical inputs are necessary to strengthen India's agricultural ecosystem. The moderator thanked all speakers, noting that the discussions from

this session will be essential in guiding future strategies for safer production, residue management and food-system resilience.



Conclusion

Session 2 concluded with a clear consensus that food safety and food security are inseparable, and achieving both requires coordinated action across regulation, industry stewardship, and farmer-centric extension. Panelists agreed that climate variability, residue compliance, global MRL disparities and the rise of AMR demand a shift toward integrated crop protection, pairing modern chemistries with biologicals and GAP-driven practices. The discussion underscored the need for harmonised regulatory processes, faster adoption of new chemistries, wider farmer training networks, and stronger digital traceability from farm to export. Overall, the session reaffirmed that balanced inputs, science-led regulation, and practical stewardship are essential to building a resilient, residue-compliant and globally competitive agricultural ecosystem.



PANEL 2

Enhancing Food Safety & Security – Role of Agri-Input Industry and Regulatory Ecosystem

8. PANEL DISCUSSION 3:

Unlocking Sectoral Opportunities – Boosting Domestic and Export Markets

Panellists:

- Shri Laxman Savalkar, Founder & Director, Magnus Farm Fresh Ltd (Grapes & Pomegranate)
- Dr. Sharmistha Naik, Scientist (Fruit Science), ICAR–NRC for Grapes;
- Mr. Athar Zia, Managing Director, Basic Gourmet Foods Pvt Ltd & Board Member, IREF (Basmati Rice)

Moderator: Mr. Jayanta Chakraborty, Mentor, Agri-Horti-Food Processing–Rural Development National Committee, Bengal Chamber of Commerce & Industry

High-Value Commodities at the Crossroads of Opportunity and Risk

The final technical session focused on three of India’s most dynamic but challenging commodity segments – **grapes, pomegranates, and basmati rice** – examining how India can strengthen domestic competitiveness while expanding its global footprint. Moderating the discussion, **Mr. Jayanta Chakraborty** emphasised that these commodities, while high-value and export-oriented, operate within complex ecosystems marked by fluctuating quality parameters, stringent import regulations, inconsistent production environments and evolving global markets. He noted that these sectors exemplify the twin reality of “challenges and opportunities,” and urged the panel to reflect on strategies that can systematically elevate India’s position in global agri-trade.



Grapes & Pomegranates – Harmonised Export Systems, Branding & Market Access

Shri Laxman Savalkar emphasised that exporters of grapes and pomegranates must navigate disparate quality and MRL regimes across Europe, Russia and the Middle East, yet India still lacks a unified single-window compliance mechanism to handle these varying requirements. He noted that Farmer Producer Companies (FPCs) have become vital by giving small growers access to packhouses, cold-chain units and infrastructure that earlier existed only for larger exporters. However, he argued that policy support must go further—India needs stronger bilateral market-access agreements, more export “windows”, and a resolution to structural bottlenecks such as steep and fluctuating freight charges that erode global competitiveness. He also highlighted the untapped promise of markets like the United States, which remain inaccessible for Indian pomegranates, despite quality improvements and recent openings in countries such as Australia. Moving to branding, he stressed that trust—not marketing—defines a global commodity’s success. Drawing on global comparisons, he stated that India’s Bhagwa pomegranate remains unmatched in sweetness, seed quality and antioxidant richness, yet Indian consumers increasingly favour imported apples over indigenous varieties with far higher nutritional and economic value. He argued that believing in India’s own produce is the first step toward building global brands and achieving the kind of identity transformation seen with fruits like Kiwi worldwide.



Grape Production, Climate Challenges & Clean Plant Programme

Dr. Sharmistha Naik detailed how climate variability, erratic rainfall, reduced sunlight and disturbed seasonality has significantly disrupted grape production in traditional belts, reducing berry firmness, sweetness and uniformity this year. She explained that India's overdependence on Maharashtra for grapes creates structural vulnerability and that diversification into non-traditional zones such as Kashmir, Himachal Pradesh, the Northeast, West Bengal and Tamil Nadu can help India produce counter-seasonally and reduce import dependence during peak demand months like July–September. She identified virus-infected planting material as one of the most serious constraints affecting quality and yield and emphasised that India's Clean Plant Programme (CPP), implemented at NRCG with ADB support, will transform planting-material integrity. The CPP establishes virus-free mother blocks (G1), certifies G2 nurseries, and creates a traceability system so any infected field-level planting can be traced back to its source. Dr. Naik also discussed value-chain opportunities—India consumes 70% of grapes as table fruit, 20–25% as raisins and only a small share as wine or juice. Raisins remain a high-potential segment, particularly in regions like Vijayapura, though consumer preference for green raisins over naturally browning black ones continues to pose a perception challenge. She added that high-altitude regions produce large, low-residue berries with minimal inputs, yet farmers there lack market access;

integrating these regions could significantly broaden India's domestic and export capacity.



DR. SHARMISTHA NAIK
Scientist (Fruit Science),
ICAR-NRC for Grapes

Basmati Rice – GI Protection, Seed Integrity & Expansion Markets

Mr. Athar Zia presented an integrated view of the opportunities and risks in India's basmati sector, noting that basmati exports (valued at ~INR 40,000 crore) are dominated by Saudi Arabia and the Middle East, with steady but smaller markets in Europe and the US. He emphasised that the next major expansion frontier lies in Eastern and Central Europe—including Kazakhstan, Uzbekistan and Afghanistan—though Afghanistan remains off-limits due to transit restrictions through Pakistan. He raised strong concerns about the rapid spread of unregulated hybrid seeds over the last decade, developed independently by multiple institutions, which dilute the core aromatic and grain-length characteristics of traditional basmati. This lack of harmonised regulation has allowed Pakistan to regain price leadership, commanding a premium of roughly USD 200 per tonne. He stressed that basmati being a GI-tagged variety demands coordinated oversight, structured seed regulation and unified breeding programmes to preserve authenticity. While basmati faces relatively fewer non-compliance issues compared to horticultural commodities, he pointed out that Europe and the UK require mandatory testing, and urged India to allow accredited global agencies like SGS, Intertek and Bureau Veritas to undertake sampling and certification to reduce dependence on a single

authority such as EIA. Responding to market-related questions, he confirmed rising basmati consumption in Bangladesh, particularly in fine-dining segments, while acknowledging that traditional aromatic small-grain rice also retains popularity.



Conclusion

In the final round, the panellists distilled their messages into concise takeaways. Shri Savalkar emphasised the imperative to “grow safely and eat healthy” while nurturing India’s global identity in premium fruits. Mr. Zia reinforced the need for protecting authenticity and building trusted, safe and globally competitive Indian food systems. Dr. Naik called for sustained attention to untapped regions and systems that ensure quality and safety reach all consumers. Audience questions ranged from organic basmati prospects to mechanisms for accessing certified planting material-addressed through clarifications on the Clean Plant Programme and the role of NHP-certified nurseries.

Mr. Chakraborty concluded by reminding that India’s domestic market of 1.4 billion people is as consequential as global markets, and that the same rigour in quality, safety and stewardship must guide both domestic and export-oriented value chains.



PANEL 3

Unlocking Sectoral Opportunities – Boosting Domestic and Export Markets

9. EXHIBITION STALLS

The Nourish India 2025 Summit featured a dedicated Exhibition Zone that brought together leading government agencies, industry innovators and technology providers working across the food safety, food processing and agri-input ecosystem. The zone served as a live interaction and demonstration space where participants explored emerging solutions, schemes and technologies supporting safer, more efficient and globally competitive agri-food value chains.

Ministry of Food Processing Industries (MoFPI), Government of India – PMFME Scheme

MoFPI showcased the flagship Pradhan Mantri Formalisation of Micro Food Processing Enterprises (PMFME) Scheme, highlighting its support for micro and small processors through credit-linked subsidies, branding assistance, incubation support and capacity building. The stall engaged participants on avenues for formalisation, common infrastructure access, and opportunities for entrepreneurs seeking to scale food processing ventures under the One District One Product (ODOP) framework.



Food Processing Industries & Horticulture Department, Government of West Bengal

The West Bengal pavilion presented the State's initiatives in horticulture development, food processing clusters, cold-chain strengthening and export-linked value-chain programmes. The stall highlighted support extended to farmers, FPOs and food processors across crop diversification, post-harvest management and market expansion. Visitors explored the State's upcoming industrial corridors, incentives and institutional frameworks enabling agribusiness growth.



WEBEL – BCC&I Tech Incubation Centre

The WEBEL–BCC&I Tech Incubation Centre highlighted its incubation facilities for emerging agri-food and processing start-ups, offering technology validation, workspace access, product development support and business mentoring. A key highlight at this stall was the demonstration by **Greenlife IQ Ponics**, where the founder presented their AI-enabled hydroponics and farm digitisation solutions. The live interaction showcased tools for traceability, predictive analytics and supply-chain efficiency, reflecting how incubation support is driving next-generation innovations within the agri-tech ecosystem.

IPL Biologicals Ltd.

IPL Biologicals featured a wide range of microbial-based bio-inputs designed to support safe crop production and sustainable agriculture. The stall highlighted solutions for residue reduction, integrated pest and disease management, and soil health enhancement, along with their programmes on farmer training and field-level stewardship. Exhibitors engaged with stakeholders on adoption pathways for biologicals in export-oriented horticulture.



Indorama India Pvt. Ltd.

Indorama India presented its integrated solutions supporting the food processing and agri-value chain, including packaging materials, industrial inputs and logistics-linked systems. The stall emphasised the company's role in strengthening supply-chain resilience, efficiency and quality compliance for processors and exporters. Visitors explored material innovations and sectoral offerings relevant for both domestic and global market-facing food enterprises.



INDORAMA INDIA PVT. LTD

Exhibition zone at the Nourish India 2025 Summit

BASF India

BASF India's stall showcased its portfolio of crop protection, agri-science and sustainable chemistry solutions that contribute to improved farm productivity while maintaining high standards of food safety and regulatory compliance. The exhibit also highlighted BASF's stewardship initiatives, farmer awareness programmes and digital tools that support better traceability, responsible input use and export-readiness across value chains.



BASF INDIA

Exhibition zone at the Nourish India 2025 Summit

Dhanuka Agritech Ltd.

Dhanuka Agritech showcased its latest agrochemical and agri-input solutions developed for enhancing crop protection, yield improvement and pre- and post-harvest management. The stall featured technical demonstrations, outreach materials and information on the company's farmer-capacity building efforts. Participants interacted with experts to understand product applications, safety protocols and field-level support mechanisms driving improved production outcomes.



DHANUKA AGRITECH LTD.

Exhibition zone at the Nourish India 2025 Summit

10. Conclusion

The *Nourish India 2025 – Food Safety & Security Leadership Summit* brought together a unique cross-section of national regulators, scientific institutions, industry leaders, financial agencies, exporters, agri-input companies, FPO representatives and agri-tech innovators to chart a unified pathway for strengthening India's food-safety and food-security architecture. Across the inaugural addresses, thematic sessions and sector-specific deliberations, a clear consensus emerged: India's next phase of progress will depend not only on production strength, but on the scientific integrity, traceability, regulatory alignment and sustainability of its entire agri-food value chain.

The Summit reaffirmed the need for evidence-based standards, expanded laboratory networks, clean planting material, responsible input use, cold-chain and processing infrastructure, digital traceability and strengthened micro-enterprise formalisation. It underscored that food safety, farmer income, export competitiveness and consumer trust are deeply interconnected. The discussions highlighted the pivotal role of MoFPI schemes, NABARD financing, APEDA's traceability frameworks, FSSAI's science-led regulation, and ICAR's research leadership in supporting a resilient system that serves both domestic and global markets.

Speakers repeatedly emphasised that technology-AI, IoT, blockchain, automation and digital compliance tools-must now become foundational across farm, processing and distribution systems. Equally important is the need for capacity building, stewardship and on-ground extension so that standards translate from laboratory protocols into everyday practice.

The Summit concluded with a shared commitment among stakeholders to work collaboratively towards an agri-food ecosystem that is safer, more transparent, more inclusive and globally competitive. *Nourish India 2025* stands as a milestone in this journey-reinforcing that India's food future will be defined not by volume alone, but by quality, trust and scientific excellence.

11. RECOMMENDATIONS

The proceedings of the Nourish India 2025 Summit underscored a shared national priority: building a science-led, financially enabled, export-ready food ecosystem. The recommendations below synthesise the institutional insights, panel deliberations and government interventions highlighted across the sessions.

1. Strengthen scientific food-safety systems

Enhance national laboratory capacity, method harmonisation and development of indigenous CRMs to support accurate testing, Codex-aligned MRLs and evidence-based standard setting, as emphasised by FSSAI, CFTRI and ICAR representatives.

2. Expand digital traceability across commodities

Scale successful traceability models such as GrapeNet to other export-oriented and high-risk sectors, supported by QR-based and blockchain-enabled systems highlighted by Agricultural and Processed Food Products Export Development Authority (APEDA) and agri-tech innovators.

3. Improve adoption of Good Agricultural Practices (GAP) and IPM

Address field-level implementation gaps through strengthened extension, stewardship and integrated use of chemical and biological solutions, as underscored by ICAR, CIB&RC and industry panelists.

4. Accelerate Clean Plant Programmes

Roll out virus-free planting material systems (G1-G2 supply chains, certified nurseries and traceability) under the Clean Plant Programme to improve productivity and quality, as described by ICAR-NRCG.

5. Utilise MoFPI schemes to build cluster and cold-chain infrastructure

Leverage PMFME Schemes, Food Processing Fund, common-infrastructure grants and cluster-based development models for establishing primary processing, cold-chain, irradiation facilities and modern packhouses as detailed by MoFPI.

6. Strengthen financial access and infrastructure creation via National Bank For Agriculture And Rural Development (NABARD)

Use NABARD's refinance windows, RIDF/IDF funds, Warehouse Infrastructure Fund, digital KCC portal and credit guarantees through NABSANRAKSHAN to enable scientific storage, logistics and value-chain integration.

7. Support micro-enterprise formalisation under PMFME Scheme

Expand outreach on credit-linked subsidies, seed-capital assistance, DPR auto-generation, capacity-building modules and branding/market-linkage support to strengthen safety compliance among micro-units.

8. Facilitate export market access through regulatory harmonisation

Address country-specific MRLs, certification bottlenecks and sampling requirements; pursue bilateral agreements for new markets (e.g., pomegranate and basmati expansion opportunities) as highlighted by exporters.

9. Promote total utilisation and value-addition in horticulture

Adopt technologies for utilising peel, seed and processing co-products to generate additional revenue streams, reduce waste and support safer production practices, as recommended by horticulture scientists.

10. Expand capacity-building and operator training

Prioritise structured training for farmers, micro-entrepreneurs, plant operators and quality personnel on safe use, labelling, risk management and regulatory compliance, reflecting MoFPI, CFTRI and FSSAI interventions.

11. Encourage safer chemistries and faster regulatory pathways

Support CIB&RC initiatives on crop grouping, digital processing, priority review of new molecules and responsible stewardship to ensure timely availability of safer inputs while maintaining compliance.

12. Strengthen farmer-centric systems for climate and market resilience

Promote balanced nutrition practices, climate-resilient varieties, diversified cultivation zones and integrated input strategies to reduce climate-related vulnerabilities, as discussed by Indorama, ICAR and industry panels.

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