

# NATIONAL CONFERENCE 2025

VIKSIT BHARAT 2047 - ONE TRILLION CONTRIBUTION BY THE AGRICULTURE  
TO THE ECONOMY:

*Role of Crop Protection Industry*

26<sup>th</sup> September 2025 | New Delhi



# National Conference 2025

## WIKSIT BHARAT 2047 - ONE TRILLION CONTRIBUTION BY THE AGRICULTURE TO THE ECONOMY: Role of Crop Protection Industry

Chief Guest



**Shri Shivraj Singh Chouhan**

Honble Minister of Agriculture & Farmers' Welfare  
Government of India



**Dr. Trilochan Mohapatra**

Chairperson - PPFVRA  
Ministry of Agriculture and  
Farmers' Welfare,  
Government of India



**Dr. Praveen Kumar Singh**

Agriculture Commissioner  
Ministry of Agriculture &  
Farmers Welfare  
Government of India



**Dr. Subhash Chand**

Secretary  
CIB & RC



**Dr. Poonam Jasrotia**

ADG  
(Plant Protection &  
Bio Safety)  
ICAR



**Dr. Vandana Tripathy**

Network Coordinator &  
Scheme Incharge (MIPRNL),  
All India Network Project on  
Pesticide Residues, ICAR



**Dr. T. M. Tripathi**

Joint Director,  
Department of Agriculture,  
Govt. of Uttar Pradesh



**Shri Gaurav Sishodia**

Vice President,  
Invest India



**Dr. Singhee Tan**

Executive Director  
CropLife Asia



**Mr. Mohan Babu**

Vice Chairman - CropLife India  
COO - Bayer CropScience



**Shri Rajju Devidas Shroff**

Scientist, Entrepreneur,  
Humanitarian,  
Padma Bhushan Awardee



**Shri Saill Singhal**

Chairman Emeritus  
PI Industries Ltd.



**Shri Kannan K. Umni**

Chairman Emeritus  
CropLife India



**Shri Chetan Shantilal Shah**

Managing Director  
Sumitomo Chemical India Ltd.



**Shri Hari Chand Aggarwal**

Chairman  
Insecticides India Ltd.



**Dr. R. G. Agarwal**

Chairman Emeritus  
Dhanuka Agritech Ltd.



**Shri N. K. Aggarwal**

Chairman  
Crystal Crop Protection Pvt. Ltd



**Shri Deepak Shah**

Chairman  
Sulphur Mills Ltd.



**Mr. Simon Wiebusch**

CEO, Bayer Crop Science Ltd  
India, Bangladesh and Sri Lanka

**Felicitations of the Stalwarts of the Crop Protection Industry**

### CEO's PANEL

**"Pesticides in the Spotlight: Villain, Hero or Scapegoat?"**

Moderator

**Mr. Prabhu Chawla**

Editorial Director, New Indian Express



**Mr. Ankur Aggarwal**

Chairman, CropLife India  
Managing Director  
Crystal Crop Protection Ltd.



**Mr. Sahin Ozkan**

Head of Commercial Unit  
ADAMA India Pvt. Ltd.



**Mr. Simon Wiebusch**

CEO, Bayer Crop Science Ltd  
India, Bangladesh and Sri Lanka



**Mr. Subroto Geed**

President - South Asia  
Corteva Agriscience



**Mr. Susheel Kumar**

Managing Director  
Syngenta India Private Ltd.

Media Partner



Broadcast Partners



**Mr. Anil Kakkar**

Vice President  
Sumitomo Chemical India Ltd.



**Mr. Rahul Dhanuka**

Managing Director,  
Dhanuka Agritech Ltd.



**Ms. Neetu Kapasi**

South Asia Leader - Government &  
Industry Affairs  
Corteva Agriscience India Ltd.



**Mr. Ravi Hegde**

Global Regulatory Lead  
SWAL Corporation



**Mr. Amiya Kumar Barita**

Strategy Marketing Lead  
Indofill Industries Ltd



**Mr. Raju Kapoor**

Director, Public and  
Industry Affairs  
FMC India Pvt. Ltd.



**Mr. Rajesh Dhawan**

Head & Senior Regulatory Expert  
Syngenta



**Mr. Manoj Lingert**

Head Regulatory Science  
Bayer CropScience  
India, Bangladesh & Sri Lanka,



**Mr. Durgesh Chandra**

Secretary General  
CropLife India

Media Partners



Outreach Partner



## Contents

	<b>Page No.</b>
<b>About CropLife India</b>	<b>1</b>
<b>Board of Directors</b>	<b>2-3</b>
<b>CropLife India Secretariat</b>	<b>4</b>
<b>KEY TAKEAWAYS</b>	<b>7</b>
<b>INAUGURAL SESSION</b> Viksit Bharat 2047 - One Trillion Contribution by the Agriculture to the Economy: Role of Crop Protection Industry	<b>8-18</b>
<b>SPECIAL SESSION</b> Global Regulatory Trends, Innovation Pathways and Opportunities for India	<b>20-21</b>
<b>PANEL DISCUSSION</b> "The Regulatory Challenges and Opportunities in the Indian Context"	<b>22-30</b>
<b>PANEL DISCUSSION</b> "Empowering Farmers, Navigating Compliances & Global Standards: A State-wise View of the Agri input (Crop Protection & Bio-stimulants) Industry & Export"	<b>32-39</b>
<b>CEO'S PANEL DISCUSSION</b> "Pesticides - Villain, Hero or Scapegoat?"	<b>41-43</b>
<b>IN THE PUBLIC EYE</b>	<b>44-47</b>

## About CropLife India

CropLife India is a leading industry association of both Indian and Global R & D driven crop science organizations. CropLife India jointly represents around 70% of the Indian crop protection market and are responsible for 95% of the molecules introduced in the country. Our member companies have an annual global R & D spend of over INR 50,000 crores.

Our member companies were established in India as far back as the 1950s. We continue to work hand-in-hand with the Government to build the agriculture sector – from introduction of several newer and safer molecules, direct investment of building factories, jobs creation, bringing in agriculture innovation and working endlessly over the years with multi-stakeholders to enhance agriculture productivity. All member companies are firmly committed to engage with the farming community to enable Safe, Secure and Sustainable Food Supply.

CropLife India members enable farmers adopt new technologies in agriculture, while providing in depth farmer trainings on good farming practices, including responsible use of crop protection products, container management and spraying techniques promotion of safe, responsible & judicious use of crop protection products under Integrated Pest Management approach.

CropLife India extensively engages with the farming community including dealers and traders for growing safe, secured and nutritious food committed to responsible crop care and crop production for sustainable development of Indian Agriculture.

CropLife India is a not for profit organization, (registered under Section 8 company) wholly funded by membership. CropLife India is a part of the CropLife International Network; and works closely with CropLife Asia & CropLife International, spread across 91 countries while engaging with diverse stakeholders to drive programs on Anti-Counterfeiting, Product Stewardship, Progressive Regulations, IPR/Data Protection, Policy & Advocacy, Communications & Outreach.

## OUR MEMBERS



## OUR ASSOCIATE MEMBERS



## BOARD OF DIRECTORS

FY 2025-26



**Ankur Aggarwal**

Chairman, CropLife India  
Crystal Crop Protection Ltd



**Giridhar Ranuva**

BASF India Ltd



**Mohan Babu**

Vice-Chairman, CropLife India  
Bayer CropScience Ltd



**Neetu Kapasi**

Corteva Agriscience  
India Pvt Ltd



**Gyanendra Shukla**

Vice-Chairman, CropLife India  
Managing Director & CEO  
Rallis India Limited



**Rahul Dhanuka**

Dhanuka Agritech Ltd



**Ramkishan Rao Thanugula**

Adama India Pvt Ltd



**Venkatraman  
Ramachandran**

FMC India Pvt Ltd

## BOARD OF DIRECTORS

FY 2025-26



**Amiya Bartia**

Indofil Industries Ltd



**Anil Kakkar**

Sumitomo Chemical India Ltd



**K. S. Thyagarajan**

PI Industries Ltd



**Ravindranath Hegde**

SWAL Corporation Ltd



**Susheel Kumar**

Syngenta India Pvt Ltd

## ASSOCIATE MEMBERS



**Toru Tamura**  
Bharat Certis Agriscience Ltd



**Mr. N. K. Rajavelu**  
Godrej Agrovet Ltd



**Mr. Sajal Kumar Biswas**  
NISSO Chemical India LLP



**Ms. Lakshmi Narayanan**  
T. Stanes & Company Ltd.

## CROPLIFE INDIA SECRETARIAT

The CropLife India Secretariat is led by a dedicated team of professionals, who play an important role in engaging with diverse stakeholders. Domain experts in the fields of Regulatory Affairs, Anti-Counterfeiting, Stewardship, Communications and Accounts, Compliance and Human Resources; hold the mantle of CropLife India.

The association has committees for various disciplines, which are represented by member companies' experts.

The different committees meet at regular intervals to carry out focussed programs, projects and engagements, to take forward the association's strategic objectives along with its vision and mission.

The functional heads at the secretariat ensure that the strategic initiatives are implemented at various levels throughout the year.



**Durgesh Chandra Sharma**  
Secretary General



**Anjana Sundriyal**  
Head - Human Resources,  
Finance & Compliance



**Joydeep Chakraborty**  
Head - Communications



**Dr. Rakesh Kumar Dahiya**  
Head - Regulatory Affairs



**Dr. Surender Kumar**  
Senior Manager-Stewardship

शिवराज सिंह चौहान  
SHIVRAJ SINGH CHOUHAN

D.O. No. 774 /AM



सत्यमेव जयते



कृषि एवं किसान कल्याण और  
ग्रामीण विकास मंत्री  
भारत सरकार  
कृषि भवन, नई दिल्ली  
Minister of Agriculture & Farmers Welfare  
and Rural Development  
Government of India  
Krishi Bhawan, New Delhi

### MESSAGE

India's journey towards becoming a **Viksit Bharat by 2047** rests firmly on the shoulders of our farmers. Agriculture is not merely a source of livelihood—it is the foundation of our cultural identity, food security and economic strength. As we look ahead, a resilient, productive and sustainable agriculture sector will be central to realizing our shared national aspirations.

In this transformative journey, the role of science, innovation and agrochemical technology is indispensable to addressing the evolving challenges in agriculture. With the impact of **climate change**, **depleting natural resources** and **rising pest pressure**, the challenges before Indian farmers are growing in complexity. To meet these challenges head-on, it is imperative to provide farmers with **scientifically proven tools**, including modern **crop protection solutions**, that can help safeguard yields and ensure higher productivity.

Agrochemicals have played a crucial role in India's Green Revolution and continue to remain essential for securing our crops from pests, weeds and diseases. Going forward, we must **prioritize innovation**, ensure **timely access to new and effective molecules** and promote **responsible usage** of these products. The Government of India is committed to enabling a **science-based regulatory framework** that supports safe, efficient and farmer-friendly technologies.

Our focus must also remain on **agricultural research and extension services**. We are investing heavily in agri-R&D to develop climate-resilient crop varieties, precision farming techniques and sustainable production models. Technology-driven initiatives like **Drone Didi**, which empowers rural women to use drones for agricultural spraying, symbolize our vision of combining **technology with empowerment** to drive inclusive growth.

Another key pillar of our vision is **awareness**—among both **farmers and dealers**. Farmers must be educated on **safe and judicious use of crop protection products**, the importance of **integrated pest management** and the benefits of **modern tools** like precision application and digital advisory platforms. Similarly, licensed dealers and retailers should be made more accountable and well-informed, as they serve as the **first line of guidance** to farmers in rural India.

We welcome the efforts of responsible industry stakeholders who work in partnership with the Government to conduct **awareness programs**, **training workshops** and **stewardship initiatives** that ensure agrochemicals are used safely and sustainably. It is through such collaborative efforts that we will protect our environment while improving agricultural outcomes.

India's agricultural transformation must be **inclusive, technology-driven and future-ready**. Let us all work together—Government, private sector, scientists, civil society and most importantly, our farmers—to realize the dream of a **Viksit Bharat by 2047**, where every farmer is empowered, every field is productive and every harvest contributes to our nation's prosperity.

I congratulate CropLife India and hope that the Annual Report 2024-25 will inspire many to appreciate and support the agricultural sector. Together, let us continue to work towards a brighter, more sustainable future for Indian agriculture.

  
(Shivraj Singh Chouhan)

Agriculture & Farmers' Welfare Minister's Office : 120, Krishi Bhawan, New Delhi-110 001

Tel. : 011-23383370, 23782594, 23073789, 23782691

Residence : 12, Safdarjung Road, New Delhi-110 001

Tel. : 011-21411095, 21411096



# NATIONAL CONFERENCE 2025

Viksit Bharat 2047 - One Trillion Contribution by the Agriculture to the Economy  
Role of Crop Protection Industry



## KEY TAKEAWAYS

- ❖ **Data-driven farmer engagement is becoming central to crop protection strategies**, as demonstrated by the use of Kisan Call Centre data to detect emerging pest outbreaks (e.g., Thrips in chilli crops) in real time.
- ❖ **Digital technologies must be mainstreamed across the agrochemical value chain** to ensure timely dissemination of advisories, improve farmer decision-making and extend outreach to under-served regions.
- ❖ **Farmer education—enabled through digital platforms—will be the single largest driver of industry growth over the next decade**, bridging knowledge gaps and improving on-ground adoption of best practices.
- ❖ **Innovation remains the cornerstone of sustainable crop protection**, requiring continuous investment in R&D, newer molecules and advanced formulations aligned with evolving agronomic and environmental needs.
- ❖ **Sustainability and innovation are no longer competing objectives**, but mutually reinforcing pillars shaping the future of agricultural productivity and environmental stewardship.
- ❖ **The agrochemical industry must reposition itself beyond an 'input supplier' role**, evolving into a strategic partner in strengthening India's food security and agricultural resilience.
- ❖ **Strengthening domestic R&D and indigenization capabilities is an urgent priority**, particularly to reduce dependence on imports and ensure timely access to innovative crop protection solutions.
- ❖ **Limited access to new crop protection technologies poses a structural risk to productivity**, with India having access to only a fraction of globally available molecules.
- ❖ **Regulatory predictability and consistency are critical enablers of innovation**, influencing investment decisions, technology introduction timelines and global competitiveness.
- ❖ **Faster and more transparent regulatory approval pathways are essential** to ensure that scientific innovation reaches farmers without undue delays.
- ❖ **Public-private collaboration is vital for scaling innovation**, particularly in areas such as digital agriculture, precision farming and sustainable pest management.
- ❖ **Emerging technologies—including drones, precision application systems and advanced formulations—require aligned regulatory frameworks and ecosystem readiness** to realize their full potential.
- ❖ **Capacity building at the farmer level remains foundational**, as technology adoption is most effective when coupled with training, trust and localized advisory systems.
- ❖ **Evidence-based policymaking, supported by real-time field data**, can significantly improve responsiveness to pest pressures and agronomic challenges.
- ❖ **India's aspiration for a self-reliant agricultural economy (“AtmanirbharKrishi”)** depends on robust innovation ecosystems, domestic manufacturing and knowledge-led growth.
- ❖ **Industry growth and national priorities are closely aligned**, as investments in crop protection innovation directly contribute to farm incomes, export competitiveness and food security.
- ❖ **The future trajectory of the crop protection sector will be shaped by its ability to integrate science, sustainability, digitalization and farmer-centricity** into a coherent growth strategy.

# NATIONAL CONFERENCE 2025

**Viksit Bharat 2047 - One Trillion Contribution by the Agriculture to the Economy**  
*Role of Crop Protection Industry*

September 2025  
New Delhi



Anil Kakkar

Ankur Aggarwal

Shivraj Singh Chauhan

## INAUGURAL SESSION

*Distinguished dignitaries and thought leaders set an inspiring tone for the National Conference 2025, reaffirming a collective commitment to making Indian agriculture a global powerhouse contributing significantly to Viksit Bharat 2047. The session underscored the vital role of the crop protection industry in enhancing productivity, ensuring food security and driving economic growth.*



### Mr. Ankur Aggarwal, Chairman, CropLife India

Mr. Ankur Aggarwal, in his theme address, extended a warm welcome to **Shri Shivraj Singh Chouhan**, Hon'ble Union Minister of Agriculture and Farmers Welfare, acknowledging his dynamic leadership and farmer-centric approach. He lauded the Minister's "Lab to Land" vision – ensuring that agricultural research and innovation truly benefit the farmer in the field.

Mr. Aggarwal outlined CropLife India's global and national footprint, representing a research-driven sector that accounts for over **70% of India's agrochemical business** and **95% of the country's molecules and chemistries**. He shared that India now exports **₹40,000 crore worth of agrochemicals annually**, positioning itself as the **second-largest exporter and fourth-largest producer worldwide**.

However, he noted that despite these achievements, India continues to face **annual crop losses worth ₹2 lakh crore** due to pest and disease damage. Citing FAO and YES Bank data, he emphasized the urgent need for effective pest management, faster regulatory pathways for new molecules and farmer education on safe and correct application practices.

Dispelling myths about pesticide overuse, Aggarwal highlighted that India's average usage is only **400 grams per hectare**, compared to the **global average of 8,000 grams per hectare**, underscoring both the efficiency and the stewardship culture of Indian farmers.

He expressed gratitude to the Government of India for **fast-tracking new molecule approvals**, enabling innovation and global competitiveness. He also stressed the importance of aligning agricultural exports with **international MRL standards** to strengthen India's position in global markets.

Mr. Aggarwal reaffirmed the industry's commitment to **Make in India, for India and for the world** and to supporting the next generation of farmers through knowledge, innovation and sustainable practices. He emphasized that natural farming, biopesticides, biostimulants and agrochemicals must **coexist within an integrated pest management framework** to ensure food and nutritional security for a population that will soon exceed 150 crore.

Concluding his address, he announced the launch of **CropLife India's Model Farms – Centers of Excellence** established across five states, showcasing modern, sustainable and scientifically guided farming practices. These model farms, he said, exemplify the industry's commitment to empowering farmers through hands-on demonstration and technology adoption.

Aggarwal ended on an optimistic note, reaffirming that with the government's guidance and the industry's collective resolve, **Indian agriculture can achieve the trillion-dollar milestone and become the growth engine of Viksit Bharat 2047**.



**Shri Shivraj Singh Chouhan, Hon'ble Union Minister of Agriculture and Farmers Welfare, Government of India** addressed the gathering comprising industry leaders, agricultural experts and policy stakeholders. He began by acknowledging dignitaries including Shri Ankur Aggarwal and Shri Mohan Babu, expressing gratitude for the opportunity to interact with representatives from the crop protection and agricultural sectors.

### Farmer as the Core of the Indian Economy

The Hon'ble Minister emphasized that the **farmer remains the cornerstone of India's economic and social fabric**, describing agricultural service as equivalent to service to the nation and to God. He reflected on India's traditional agrarian heritage and reiterated the need to sustain the dignity and prosperity of farmers through modern science and technology.

### Growth and Opportunities in Agriculture

Highlighting the **10% growth in agricultural production** recorded between April and August, the Hon'ble Minister noted that India's progress is both encouraging and promising. However, he pointed out that the **average landholding in India remains small**, typically 2–3 acres, compared to 10–15 hectares in countries such as Australia, Brazil and across Europe. This, he said, calls for **India-specific strategies** to enhance productivity and profitability for small and marginal farmers.

He further observed that India's population, currently at **140 crore**, is projected to reach **170 crore by 2050**, underlining the need to ensure **food and nutritional security** through increased productivity and resource efficiency.

### Innovation and Productivity Enhancement

The Hon'ble Minister underscored the importance of **scientific innovation and gene-editing technologies** to improve crop productivity. He mentioned that Indian scientists are actively developing **gene-edited seeds** which could potentially enhance yields by **25–30%**. He called for a **step-by-step approach** to increase production while ensuring sustainable practices and optimal use of inputs.

### Pest Management and Research Initiatives

Addressing concerns raised by farmers, the Hon'ble Minister referred to emerging pest and disease challenges such as **red rot disease in sugarcane** and **pink bollworm in cotton**. He announced the formation of **five dedicated research teams** to conduct field-level investigations and devise effective, science-based solutions.

He stressed that the outcomes of research must **reach farmers at the grassroots level**, ensuring that the benefits of innovation are realized in actual cultivation and productivity gains.

### Empowering Farmers and Reducing Costs

The Hon'ble Minister urged collective efforts to **reduce production costs, rationalize pesticide and fertilizer use** and **educate farmers** on sustainable practices. He noted that while production levels have improved, high input costs often limit profitability. Greater awareness, field demonstrations and hands-on support were identified as key measures to bridge this gap.

**Shri Shivraj Singh Chouhan** reaffirmed the shared responsibility of **Government, industry and scientific institutions** to strengthen India's agricultural ecosystem. He called for **unified action** to make Indian agriculture globally competitive, economically viable and environmentally sustainable—ensuring that farmers remain at the heart of the nation's growth story.

### Significant Role of Crop Protection

Continuing the discussion, Shri Shivraj Singh Chouhan highlighted the **essential role of pesticides and plant protection products**—which he described as "*plant medicines*"—in safeguarding agricultural productivity. He stressed that such products are indispensable for crop health and food security, even within the framework of **natural and organic farming systems**.



## The Necessity of Crop Protection

The Hon'ble Minister explained that even traditional and natural farming methods rely on pest control measures. He cited formulations such as **Neem Astra**, **Jeevamrit** and **Beejamrit**, noting that while these may not be classified as agrochemicals, they serve the same purpose: **protecting crops from pests and diseases**.

He reiterated that unchecked **pest infestations and weed growth** lead to yield losses worth **thousands of crores of rupees annually**, underscoring that effective crop protection is crucial to sustaining national agricultural output.

## Ensuring Safety and Public Confidence

While affirming the necessity of pesticides, Shri Chouhan emphasized two key imperatives for the sector:

1. **Proven Human Safety:** All agricultural inputs must be **scientifically validated as safe for human health**, ensuring that progress in productivity does not compromise well-being.
2. **Eliminating Counterfeit Products:** Expressing concern over the menace of **spurious and counterfeit pesticides**, he noted the severe harm they cause to farmers and the industry's credibility. He urged **responsible industry leaders** to collaborate with the Government to eradicate counterfeiting through **strict enforcement and joint vigilance**.

## Developing Simple Detection Mechanisms

Acknowledging that India has **millions of farmers**, the Hon'ble Minister noted the challenge of ensuring awareness and authenticity at scale. He suggested that **scientists and industry innovators** develop **simple, reliable mechanisms** to help farmers verify the genuineness of products. Such tools, he said, would enhance **farmer empowerment, accountability and public confidence** in the crop protection ecosystem.

Concluding his remarks, **Shri Shivraj Singh Chouhan** reaffirmed that **plant protection is indispensable** for sustaining and enhancing India's agricultural productivity. However, he emphasized that it must be pursued responsibly—anchored in **human safety, authenticity and scientific validation**.

He urged the industry to prioritize **safety over cost** and to ensure that every effort in crop protection contributes to **India's vision of a self-reliant, globally competitive and farmer-centric agriculture sector**, advancing the nation's progress toward *Viksit Bharat 2047*.



**Mr. Anil Kakkar, Vice President, Sumitomo Chemical India Ltd.**

Mr. Anil Kakkar addressed the **National Conference 2025** with a warm and spirited address, extending heartfelt greetings to the distinguished dignitaries, senior industry leaders and CropLife members present. The occasion, he said, was a proud one—bringing together the stalwarts of India's crop protection sector on a single platform.

He fondly referred to the morning's group photograph as “a memorable one for the industry,” with familiar faces like Shri Chetan Bhai, Shri Unni Sahab, Mr. Singhal, Deepak Bhai, Mr. R.G. Agarwal, Mr. Simon and Shri Nand Kishore among others joining in. “It's wonderful to have everyone together,” he said, acknowledging the collective leadership that continues to shape India's agricultural journey. Mr. Kakkar also extended a special welcome to Shri Hari Chand

Agarwal, wishing him good health and expressing gratitude for his presence.

## A Gathering of the Entire Industry

While acknowledging that this was a CropLife event, Mr. Kakkar underlined its inclusive spirit—drawing participation from all major associations and industry stakeholders, including the **Chairmen of CCFI and ACFI**. “This is a unique gathering,” he noted, “where everyone concerned with this industry has come together under one roof.”

## India's Agricultural Ascent

In his remarks, Mr. Kakkar referred to the observations made by Union Minister Shri Nitin Gadkari at a recent function, where he had emphasized that **India's rise to Viksit Bharat would hinge upon agriculture's growing contribution to GDP**.

“Food production in India continues to increase each year,” Mr. Kakkar said, highlighting the nation's resilience despite weather adversities such as excessive rainfall. “Even with challenges, our production targets remain robust—proof of the vibrancy of this sector.”



He emphasized that small and marginal farmers are now investing more confidently in agriculture, driven by better remuneration and market opportunities. “India,” he affirmed, “is the food bowl of the world.”

### Crop Protection: A Pillar of Progress

Tracing the evolution of the industry, Mr. Kakkar reminded the audience that **the crop protection sector has been a steadfast partner in India's progress since the Green Revolution era.** “Many of those who witnessed the transformation from the days of PL-480 to today's era of surplus are sitting right here,” he said with pride.

India, he declared, has traveled from being a “begging bowl” to becoming an **exporter of agricultural commodities.** As the country engages in global trade negotiations with the EU and the US, he expressed confidence that India is now positioned as an equal partner—“no longer a nation that can be dictated to.”

### Industry Growth and Emerging Trends

Mr. Kakkar spoke about the remarkable growth witnessed by the crop protection industry over the past decade. “New molecules have entered the market and yet, there is a long road ahead,” he noted, setting the stage for detailed insights to be shared later by the CropLife leadership team.

He observed that farmers, as direct users of crop protection products, **deeply value agrochemicals** for their role in safeguarding yields. However, he pointed out that **perception challenges persist among non-users and policy circles,** where agrochemicals are sometimes viewed with skepticism.

“Biologicals and biopesticides are welcome innovations,” he said, “but they are not replacements for agrochemicals. They must complement, not compete.”

He reaffirmed that CropLife India and its members have always promoted **Integrated Pest Management (IPM)** and stewardship, advocating for safe and judicious use of all crop management tools.

### Changing Perceptions: A Shared Responsibility

Mr. Kakkar highlighted that improving the public perception of the crop protection industry remains a **shared agenda** for all associations. “Among farmers, our image is strong—they trust and rely on our products,” he said. “But we must communicate better with non-users and the wider public.”

He called upon media professionals present to play a constructive role in conveying the **rightful message about the industry**—that it is science-based, safety-conscious and vital to food security.

Referencing European policy debates about reducing pesticide use by 50% by 2030, he remarked that such targets are often “wishful political statements,” detached from ground realities. “Farmers live in reality,” he said, “and their reality is that they need our products.”

### Safety, Stewardship and Self-Reflection

Mr. Kakkar emphasized that while the industry continues to engage with regulators and policymakers, it must also introspect. “We have a responsibility within our own hearts,” he said, “to promote safe and judicious use—right products, right dosage, right timing.”

He lauded the industry for being **one of the few with thousands of agriculturally qualified professionals directly engaging with farmers**—a unique model of field-level service.

Drawing a vivid comparison, he noted, “In human medicine, medical representatives speak only to doctors, not patients. But in our industry, our technical teams go directly to the farmers—our true customers. That’s the strength of our sector.”

### The Call to the Next Generation

Turning reflective, Mr. Kakkar observed that the **future of the industry now lies in the hands of the younger generation**. “In earlier years, our contribution was widely recognized,” he said. “Today, it is upon the youth to restore that pride and carry the torch forward.”

He urged young professionals to **build credibility, transparency and trust** and to be the ambassadors of the sector’s positive transformation. “The image of the industry will rise,” he said, “only when the next generation drives it with conviction and purpose.”

Mr. Kakkar concluded by expressing his **deep gratitude on behalf of CropLife India** to all dignitaries, members and participants for their presence and engagement.

He reiterated that the day’s deliberations—ranging from policy and innovation to the closing debate on “*Pesticides: Hero, Villain, or Scapegoat?*”—would help shape the industry’s roadmap toward **Viksit Bharat 2047**.

“Together,” he said, “we will continue to ensure that Indian agriculture rises—scientifically, sustainably and with pride.”

### Session Remarks by Dr. Trilochan Mohapatra



**Chairperson, Protection of Plant Varieties and Farmers' Rights Authority (PPVFRA), Ministry of Agriculture and Farmers' Welfare, Government of India**

Dr. Trilochan Mohapatra began on a light and candid note, observing that early morning sessions often foster intimate, meaningful conversations. With his trademark wit, he admitted uncertainty about his place in a conference centered on plant protection, since his specialization lies in the protection of plant varieties—a field frequently mistaken for pesticides. Yet, he affirmed that the themes of pest management, crop loss prevention and herbicide usage are deeply intertwined with the nation’s agricultural sustainability. His participation, he said, was both relevant and necessary.

### The Continuing Legacy of the Green Revolution

Reflecting on India’s agricultural journey, Dr. Mohapatra acknowledged that while the Green Revolution has drawn criticism, it remains one of the most defining milestones in India’s history. It not only ensured food security for millions but restored self-respect and confidence to a newly independent nation. He noted that the Revolution’s success was built on borrowed technologies—but India’s genius lay in adapting and mastering them. “The lesson,” he said, “is not in the borrowing, but in how effectively we used the tools we had.” He urged scientists and industry leaders to now channel that same ingenuity into developing **home-grown innovations and intellectual property**—the true engines of the next agricultural transformation.

### Growth in Agriculture and Horticulture

Citing India’s steady ascent in production, Dr. Mohapatra observed that food-grain output has risen from 262 million tonnes to nearly 350 million tonnes and horticulture production now exceeds 367 million tonnes. This, he noted, reflects the resilience and vibrancy of Indian agriculture. Yet he posed a crucial question: *How much of this growth is truly indigenous?* India, he warned, remains dependent on imported fertilizers and agrochemicals—dependencies that must be reduced through strategic innovation and domestic production.

### Agrochemical Sector: Growth, Structure and Support

Applauding the robust growth of India’s agrochemical industry, Dr. Mohapatra noted its annual expansion rate of 9–11%, with a market size of over USD 14–15 billion. Herbicides lead the market with a 40% share, followed by insecticides and fungicides. He recognized both global majors—Bayer, BASF, Syngenta—and emerging Indian enterprises for their contributions.

He spoke with pride about his role in creating India’s first national regulatory framework for **biostimulants**, predicting this segment’s vital role in sustainable agriculture.

“No technology,” he reminded the audience, “can fully replace agrochemicals—they remain a pillar of productivity and food security.”

## Balancing Growth with Environmental and Health Concerns

Dr. Mohapatra addressed the dual responsibility of productivity and protection. Nearly half of India's rivers, he noted, are affected by agricultural runoff. Although less than 2% of pesticide residue samples exceed permissible limits, even isolated violations can threaten public health and exports. He emphasized that **sustainability and safety must progress hand-in-hand**, calling for responsible use, robust regulation and scientific vigilance to safeguard consumer trust and environmental health.

## Regulatory Bottlenecks and Quality Concerns

Drawing from his institutional experience, he discussed the persistent delays in agrochemical registration despite digital reforms and expanded label claims. He posed a pointed question: *Why do spurious pesticides persist despite regulations?* He urged industry to take shared responsibility for eradicating unsafe and counterfeit products, stressing that ensuring farmer safety must be a collective priority. "If we wish to be recognized as responsible contributors to India's agricultural story," he said, "we must guarantee that no unsafe product reaches our farmers."

## The One-Trillion Vision: Defining the Sector's Role

Tying his remarks to the conference's central theme, Dr. Mohapatra noted that agriculture currently contributes around USD 650 billion to India's GDP. To reach the **one-trillion mark**, a gap of USD 350–400 billion remains. "How much of that gap can this sector bridge?" he asked.

He proposed a structured roadmap—mapping product potential, unlocking export opportunities and bolstering domestic innovation—to ensure that the **crop protection industry becomes a growth catalyst** in India's agricultural ascent.

## Research, Human Resource and Innovation Imperatives

Dr. Mohapatra highlighted a pressing need for **investment in research and human capital**. Fertilizer research, he lamented, is nearly non-existent and new molecule discovery remains minimal. "If China stops supplying active ingredients tomorrow, how self-reliant are we truly?" he asked. He called for joint public-private investments, stronger laboratory networks and expanded training for farmers, dealers and technologists alike. "The question is not whether we can innovate," he said, "but whether we are willing to invest at the scale global leaders."

## Farmers, Extension and the Human Link

Dr. Mohapatra declared that farmers remain the ultimate arbiters of growth. "If farmers are unaware," he warned, "your growth will remain limited." He emphasized **need-based extension**, urging the industry to educate farmers, particularly in underserved regions like Eastern India. He cited how many farmers attribute yield loss or fruit drop to fate rather than science—something only knowledge can correct. He pointed to Kisan Call Centre data from Andhra Pradesh—where spikes in queries about Thrips in chili crops offered real-time insight into emerging challenges—as proof that **data-driven outreach** can transform the industry's approach.

Bringing the conversation to the digital frontier, he challenged the audience:

"You must drive this need-based extension. How will you enable it in the digital era? AI pilots on a few thousand hectares will not move the needle. India has 14 crore farmers—who will reach them?"

He urged agrochemical companies to **mainstream digital technologies** for farmer education, ensuring that innovation reaches "the unreached." This, he said, will be the **biggest driver of industry growth** in the decade ahead.

## Reimagining the Future: Self-Reliance and New Frontiers

Dr. Mohapatra stressed the need for a culture of *action with timelines*. "We have the talent and infrastructure," he said, "but without ownership of technology, we remain dependent."

Drawing an analogy from the digital world, he warned of India's reliance on global data platforms. "If access to digital sequence data is blocked tomorrow, where will our research stand? We must own our data, our technologies, our discoveries."

He encouraged the industry to prepare for **new agricultural paradigms**—from quality planting material and bio-stimulants to the potential of organic and natural farming. "If India goes fully organic one day," he mused, "where will your role lie?" He cited successful biocontrol examples, such as in papaya, as proof that the **future of crop protection lies in innovation blended with sustainability**.

Dr. Mohapatra concluded with conviction and hope: "The Green Revolution gave us food security; the next must give us intellectual security—rooted in our own innovations, technologies and the wisdom of our farmers."

He urged the agrochemical industry to see itself not merely as a supplier of inputs but as a **strategic partner** in building a self-reliant, innovation-led agricultural economy. His final words left a resonant call for unity, accountability and imagination—qualities that will define India's agricultural journey toward **Viksit Bharat 2047**.

## Shri Shivraj Singh Chouhan

Hon'ble Union Minister of Agriculture and Farmers Welfare  
Government of India  
Felicitating the Stalwarts



## STALWARTS

**Dr. Kannan Unni, Chairman Emeritus, CropLife India**

Dr. Kannan Unni reflected on his **five-decade-long association with Indian agriculture**, noting that his journey began as an agricultural graduate committed to enhancing productivity and addressing the recurring challenges faced by farmers. He described agriculture as a “continuous war” between pests and the solutions designed to manage them, underscoring the ever-evolving nature of crop protection.

Drawing upon landmark moments in India's agricultural history, Dr. Unni recalled his participation in the era of the **Green Revolution**, referencing early work on paddy varieties and subsequent innovations that strengthened India's food security. He highlighted the industry's contributions in responding to major pest outbreaks, including those affecting cotton and the widespread weed challenges encountered in Punjab. The sector, he noted, introduced **selective herbicides** and successive generations of solutions that helped stabilise productivity when crises escalated.

Dr. Unni emphasized that the growth of India's crop protection industry has been remarkable. When he began his career, the industry's size was **under INR 1,000 crore**; today, the domestic market stands at **approximately INR 30,000 crore**, supported by **exports exceeding INR 21,000 crore**. This transformation, he said, has been enabled by a strong culture of **Make in India**, significant investments in domestic manufacturing and close collaboration among **industry, the Department of Agriculture and agricultural universities**.

Despite these achievements, Dr. Unni stressed that **much more remains to be done**, particularly because the **farmer remains the true customer** of the industry. With rapid advances in precision technologies, including AI, satellite-based monitoring, digital advisory systems and innovations in seeds, water management, fertilizers and crop protection, he urged that these tools must reach farmers effectively. Recalling the earlier slogan “**lab to land**,” he emphasised that the current challenge is to ensure that cutting-edge technologies translate into real benefits in the field.

He noted that agriculture continues to serve as the **backbone of the Indian economy** and that the combined expertise of senior leaders in the sector represents nearly **500 years of collective experience** contributing to national development and self-reliance.

In closing, Dr. Unni expressed his deep personal commitment to Indian agriculture, affirming that he would continue to support and contribute to the sector **as long as he is physically able**. He thanked the gathering and reiterated his belief in the industry's vital role in driving India's future growth.

**Mr. Deepak Shah, Chairman, SML Group**

Mr. Deepak Shah opened his remarks by acknowledging the valuable insights shared earlier in the session and their relevance to the industry's collective progress. He highlighted the observation made by Hon'ble Minister Shri Nitin Gadkari that agriculture currently contributes 18 % to India's GDP, with the ambition to raise this to 26 %. This goal, he noted, reinforces the long-standing industry belief that **India's economic strength is fundamentally tied to the prosperity of its farmers**.

He underscored the strong performance of India's crop protection sector, particularly in exports, which have reached nearly **INR 40,000 crore in the past two years**, with significant headroom for further growth. The domestic market, estimated at **INR 30,000 to 35,000 crore**, also holds considerable potential, contingent upon the advancement of a supportive policy environment and sustained innovation.

Mr. Shah emphasized the urgent need to deepen **indigenization and domestic research capabilities**. While multinational companies continue to conduct substantial R&D abroad, especially in Europe, he stressed the importance of expanding research centres and scientific investment within India. He acknowledged the encouraging efforts already underway by several Indian and multinational companies, yet urged **greater industry-wide participation** to accelerate innovation and reduce dependence on external technologies.

He further highlighted the need to pursue **advanced research, including the development of New Chemical Entities (NCEs)**. While a few organizations have made commendable progress in this area, he expressed hope that many more would invest in frontier research, leveraging India's strong scientific and talent base.

Strengthening domestic innovation, Mr. Shah concluded, is not only essential for supporting the **Make in India** vision but is also critical to addressing the evolving needs of India's farmers. Thanking the audience within the allotted time, he reaffirmed the industry's shared commitment to research-led growth and farmer-centric development.



**Mr. Harichand Agarwal, Executive Chairman & Whole-Time Director, Insecticides India Ltd.**

Mr. Harichand Agarwal delivered an emotional and inspiring address, reflecting on a remarkable entrepreneurial journey spanning more than five decades. Expressing gratitude to CropLife India for the recognition, he noted that his association with the agriculture and crop protection industry began in the early 1970s—a journey that has since grown into a four-generation legacy.

Sharing his personal story with candour, Mr. Agarwal recounted how he entered business at the young age of 16 due to financial responsibilities, even before completing formal schooling. What began as a small trading operation in the 1970s evolved into the establishment of his first company, HPM, in 1972. Over the years, the family expanded into multiple businesses run independently by his brothers.

Mr. Agarwal emphasized that the growth of the company was made possible through sustained investment in **research and development**, strategic collaborations with multinational partners and a continuous focus on building indigenous manufacturing capabilities. He reaffirmed his company's commitment to expanding further and contributing to the future of the Indian crop protection sector.

Closing his remarks, he expressed pride in seeing the third and fourth generations leading the business. He ended with heartfelt thanks to CropLife India and the audience for the recognition.



**Mr. Nand Kishore Agarwal, Chairman, Crystal Crop Protection Limited**

Mr. Nand Kishore Agarwal began by expressing appreciation for the growing leadership of the **fourth generation** within India's agri-input and crop protection industry. He highlighted how young leaders—from families across associations and companies—are now bringing **new technology, new ideas and renewed energy**, taking the industry forward at an impressive pace.

Transitioning to key concerns, Mr. Agarwal stressed that discussions on **food sustainability** often overlook a fundamental question: *What about the sustainability of the farmer?* He cautioned that if farmers struggle to survive economically, the entire industry is at risk.

He elaborated that farmers, who once cultivated crops at near-zero input costs, now spend **over INR 20,000 per acre** on agri-inputs. Despite periodic increases in MSP, income growth has not kept pace. This rising cost–return imbalance has pushed nearly **40 percent of farmers to consider leaving agriculture**, especially when the value of their land could yield far higher returns through non-farm avenues such as fixed deposits.

Mr. Agarwal emphasized that while the industry often discusses its own regulatory and market challenges, it must also focus on **farmer viability**, which is key to long-term sector's health.

Speaking about industry dynamics, he noted the increasing consolidation through mergers, acquisitions and joint ventures—especially among multinational companies. The landscape, he said, will continue evolving, with questions about how many players will expand, collaborate, or exit.

On the technology front, he highlighted the industry's shift from older chemistries—such as organophosphates and chlorinated compounds—to **newer, low-volume, high-efficacy molecules**. He also emphasized the accelerating transition toward **green chemistries, biopesticides, natural solutions, plant stimulants and PGRs**. Once dismissed, biological solutions are now gaining momentum, driven by government focus on natural farming and the sector's own R&D advancements. He pointed out that biopesticides and PGRs, which once held a mere 5 percent market share, now account for nearly **15 percent of the agri-input segment**.

Drawing from his deep experience in agricultural R&D, Mr. Agarwal highlighted that nature itself offers many untapped solutions. He illustrated this by referring to microbial and soil discoveries—suggesting that even a small sample of soil from biodiversity-rich areas such as Uttarakhand can yield promising biological agents. With proper extraction, fermentation and scientific development, India can unlock a new generation of **bio-based agricultural inputs**.

He reaffirmed that unlocking these opportunities will require **joint deliberation** among scientists, industry leaders, government bodies and experts. Through such collaboration, he believes meaningful solutions can be identified in the interest of Indian farmers and the nation's agricultural growth.

Addressing the issue of product duplicacy, Mr. Agarwal acknowledged that complete elimination may not be feasible given the presence of **thousands of manufacturers**, but reductions are possible through better processes and farmer education.

He concluded with a strong call for positive, collective thinking and a shared commitment to advancing Indian agriculture through innovation, responsible practices and farmer-centric strategies.



**Mr. Mohan Babu, Vice Chairman, CropLife India**

Mr. **Mohan Babu**, Vice Chairman of CropLife India, delivered a heartfelt vote of thanks following the inspiring address by **Shri Shivraj Singh Chouhan**, Hon'ble Union Minister of Agriculture and Farmers Welfare. He began by expressing deep gratitude to the Minister for taking time from his busy schedule to address the industry and for sharing a message that, in his words, *“has truly energized everyone present.”*

Acknowledging the efforts behind the Minister's participation, Shri Babu commended **Shri Ankur Aggarwal**, Chairman, CropLife India and the organizing team for their dedication in making the event a success. He lauded Shri Aggarwal's opening address, describing it as *“a powerful articulation of the road ahead and a fitting tribute to the vision of our senior colleagues who built the foundation on which we now stand.”*

Reflecting on the evolving role of the crop protection industry, Shri Babu urged the fraternity to move from a defensive stance to a confident, forward-looking posture. *“We must play on the front foot,”* he said, emphasizing that the time has come for the industry to proactively shape narratives around science, sustainability and farmer welfare.

He underlined the importance of **collective action** across four key areas – research, regulatory engagement, industry image and field-level extension. Collaboration, he noted, would be central to advancing innovation, improving public perception and ensuring that technology reaches farmers effectively.

Shri Babu also extended appreciation to **Dr. Mohapatra** for his insightful morning address that provided valuable global perspectives and guidance and to **Shri Anil Kakkar** for charting a progressive vision for the industry's future.

Concluding his remarks, he thanked all delegates, dignitaries and participants for their enthusiastic presence and support, reaffirming CropLife India's commitment to driving agricultural transformation through partnership, innovation and integrity.





## SPECIAL SESSION

### Global Regulatory Trends, Innovation Pathways and Opportunities for India



**Dr. Siang Hee Tan, Executive Director, CropLife Asia**

The post-lunch technical session featured an insightful address by **Dr. Siang Hee Tan**, who examined the rapidly evolving global regulatory landscape, emerging innovation pathways, and their strategic implications for India's crop protection sector. Acknowledging time constraints, Dr. Tan focused on the most critical global developments and underscored the urgent reforms required for India to capitalize on its opportunity to emerge as a global agrochemical powerhouse.

#### Global Innovation and Investment Trends

Dr. Tan highlighted the scale of global R&D investments shaping modern agriculture, with approximately **USD 3 billion annually invested in seeds and traits** and **USD 2.8 billion in crop protection research**. These investments reflect the accelerating pace, rising costs, and growing complexity of agricultural innovation worldwide.

#### Science, Policy and Market Realities

He cautioned that globally, science-based decision-making is increasingly influenced by political narratives rather than evidence. Referencing debates around **atrazine in the United States** and broader polarization on climate science, Dr. Tan noted that declining trust in scientific institutions is reducing regulatory predictability. For countries like India, which rely on stable and science-driven regulatory systems to attract innovation and investment, this trend presents a serious challenge.

While markets are gradually stabilizing post-pandemic, the global crop protection industry continues to face **uneven recovery, persistent supply-chain disruptions, and slow technology adoption** in several regions. Ensuring timely access to innovation, particularly for developing economies, remains critical to sustaining agricultural productivity.

#### Rising Regulatory Pressures and Innovation Constraints

A central theme of the presentation was the steady escalation of regulatory burdens worldwide. Expanding data requirements are driving up registration costs, including in India under **CIBRC**, while registration timelines commonly extend to **5-7 years**, even in ASEAN countries. In the US and EU, repeated re-evaluations have led to reclassification or withdrawal of products, contributing to a shrinking global crop protection toolbox. In the United States, usable active ingredients have declined from **around 70% in the 1960s to nearly 30% today**.

Dr. Tan highlighted that registration costs now account for **nearly 14% of an average USD 300 million R&D investment**, compared to about 8.6% earlier. Longer time-to-market and constrained returns are placing increasing pressure on global innovation pipelines unless regulatory systems adapt.

#### China's Momentum and the AI Inflection Point

China's rapid advancement was underscored as a key global benchmark. In **2023 alone, 65 new products were launched**, alongside a growing number of **ISO-recognized new active ingredients** and sustained investments in domestic innovation capacity. Artificial intelligence is further accelerating discovery cycles, with examples such as **Huawei's AI-enabled pesticide discovery platform**, supported by over 300 researchers. While multinational companies are adopting AI-driven discovery, China's pace of innovation in this area is rising even faster.

#### India's Opportunity as a Global Production Hub

Dr. Tan noted that India is well-positioned to emerge as a major manufacturing hub for crop protection products, supported by strong chemical engineering talent, competitive costs, and a growing export footprint. However, compared to China, India faces gaps in the **number of registered active ingredients, depth of its innovation ecosystem, value-chain integration, and regulatory agility**. Addressing these gaps will require strengthening R&D capability, regulatory predictability, manufacturing ecosystems, and innovation-led growth pathways.

### Registration Gaps, Post-Patent Dynamics and PRD

Comparative analysis showed that countries such as **Australia and Brazil** enjoy access to a much wider pool of registered active ingredients, while many globally available AIs remain unregistered in India, limiting farmer access and industry competitiveness. Dr. Tan highlighted that **32 molecules went off-patent in 2023**, with China preparing to manufacture **82% of these by 2030**, raising questions on India's preparedness to leverage post-patent opportunities.

China's provision of **six years of Protection of Regulatory Data (PRD)** was cited as a key enabler of secure investment, while India's absence of PRD continues to dampen investor confidence. Greater transparency in manufacturing capacity and production, as practiced in China, was also highlighted as an area for India to consider.

### Emerging Technologies and the Road Ahead

Rapid advances are underway in **biologicals, peptides, RNAi, and genome-edited traits**. While India is progressing in gene-edited crops, including work on viral-resistant rice, Dr. Tan stressed the need for stronger alignment between regulatory frameworks and innovation ecosystems.

### Conclusion: A Strategic Inflection Point for India

Dr. Tan concluded by emphasizing that regulatory pressures are rising globally even as innovation cycles lengthen and R&D costs escalate. AI and advanced technologies are reshaping discovery and pest management, and India has a **once-in-a-generation opportunity** to emerge as a global crop protection hub—provided it accelerates registrations, implements PRD, strengthens R&D ecosystems, and ensures faster farmer access to innovation.

Despite recent progress, including work on **340 molecules and 36 approvals**, he emphasized that momentum must accelerate. A **functional, innovation-friendly regulatory system** is essential to convert India's potential into sustained global leadership.



26<sup>th</sup> September 2024  
New Delhi

Media Partners



Outreach Partner



PANEL DISCUSSION

"The Regulatory Challenges and Opportunities in the Indian Context"

## PANEL DISCUSSION

### "The Regulatory Challenges and Opportunities in the Indian Context"



**Mr. Amiya Kumar Bartia** Director, CropLife India & Strategy Marketing Lead, Indofil Industries Ltd., welcomed the panelists on behalf of CropLife India and highlighted the centrality of regulatory systems in advancing India's "Make in India" vision for the crop protection sector. The regulatory processes particularly those related to the registration of formulations and technical-grade products remains among the most widely discussed topics within the industry. Mr. Bartia emphasized the need for faster registration timelines to ensure that quality formulations and reliable technical sources reach the Indian market without undue delay. At the same time, we need to ensure safeguards and screening mechanisms so that only high-quality, credible technical materials are approved for use in India.

To achieve this balance, deeper industry-regulator brainstorming and collaborative engagement are essential. This would help India evolve a regulatory framework that supports timely access to new innovations while ensuring robust residue guidelines, thereby safeguarding exports and preventing future trade disruptions arising from MRL-related issues. Mr. Bartia requested the panelists to commence the discussions and reiterated CLI's commitment to supporting a regulatory ecosystem that enables growth, quality and global competitiveness.



**Mr. Rajesh Dhawan**, Lead - Regulatory Affairs Committee, CropLife India & Head Crop Protection - Regulatory India & Senior Regulatory Expert, CPD India, Syngenta India Pvt. Limited took the baton to moderate the session. He set the tone with extending a warm welcome to the delegates. Mr. Dhawan highlighted that regulatory sessions consistently attract high participation due to the criticality of licensing pathways, compliance frameworks and timelines that influence every stage of innovation, product launch and market availability.

#### Regulation: Challenges and Opportunities

Addressing a common query from delegates on what constitutes "opportunities" in regulation, Mr. Dhawan observed that while regulatory hurdles can create significant pressures—delaying launches and complicating planning—they also form the basis for the profession itself.

#### Key Issue Raised: Tolerance Levels at Customs

Mr. Dhawan drew attention to recurring complications during import clearance of formulations. The customs officials often raise objections when minor variations appear in the active ingredient concentration—for instance, 5% versus 5.1%—despite such deviations falling within accepted positive or negative tolerances. This frequently results in delays, additional correspondence and logistical bottlenecks. He suggested that a formal circular clarifying acceptable tolerance ranges, issued to customs authorities, could substantially ease processing and reduce unnecessary delays for industry stakeholders.

Expressing his gratitude for the opportunity to engage with senior leaders of crop protection industry, **Dr. Subhash Chand**, Secretary, CIB&RC acknowledged the deep experience and institutional legacy present in the room.

Turning to the technical issue raised by industry—specifically, tolerance limits applied during import verification—Dr. Subhash explained that the **BIS standard IS 6940** clearly defines tolerance limits for various concentration ranges of active ingredients, including: **0-1%, 10-49% and 50% and above**. These correspond to specified positive and negative tolerances (e.g., +10/-5, +5/-5, +5/-3), which should guide assessments by customs authorities. He emphasized that when discrepancies arise, they are often not due to gaps in regulation but due to interpretation issues or, at times, procedural hurdles at the field level. Illustrating this, he narrated a recent case where an imported glyphosate consignment was incorrectly flagged under Quality Control Order (QCO) requirements—even though the QCO for pesticides is **not yet implemented** in India. Despite providing clarification, the company had to pursue a second confirmation, resulting in unnecessary delays of nearly 45 days. He acknowledged that such challenges reflect gaps in awareness and consistency across enforcement agencies. While BIS standards are unambiguous, issues persist particularly for **molecules with active ingredient content below 1%**, where tolerance limits are not explicitly covered under IS 6940.

He assured the industry that if the existing provisions are insufficient to resolve operational challenges, companies are welcome to submit a representation. CIB&RC is fully prepared to place such matters before the Registration Committee (RC) for consideration and, if needed, to issue a formal notification to harmonize practice and provide clarity to customs authorities.

### Import for Export (B2 Category) – Challenges, Risks and Regulatory Rationale

A significant portion of the discussion focused on the industry's concerns relating to the **Import-for-Export (B2)** category. Dr. Subhash provided historical context, explaining that the current framework originated nearly a decade ago, when guidelines were revised to facilitate exports, especially for products registered for domestic use but imported from unapproved technical sources. Earlier, when a product was registered for domestic use, imports from unapproved sources were disallowed to prevent diversion into the domestic market. When guidelines were revised to promote exports, several safeguards such as **purchase order, registration certificate** from the importing country, **quantity, documentation** etc. were introduced. These safeguards may appear stringent, but they serve to prevent diversion of unregistered or unapproved products into the domestic market, which remains a major enforcement challenge.

### Current Bottlenecks and Practical Difficulties

*Industry participants highlighted challenges w.r.t new molecules not registered in India or the importing country—where both parties ask for each other's registration certificate, creating a procedural deadlock. This hampers export opportunities, particularly for products solely meant for export markets and not intended for domestic distribution.*

Dr. Subhash acknowledged the concern, particularly in the context of genuine exporters and “Star Export” companies. However, he cautioned that removing the requirement of registration certificates may open pathways for misuse. CIB&RC is always open to evaluating improvements within the existing regulatory framework. As a possible solution, he suggested companies to submit specific cases in writing, propose viable alternative filters, especially for products *not registered for domestic use*, where diversion risk is inherently lower; and suggest documentation mechanisms that maintain safeguards while reducing bottlenecks. He reaffirmed that any proposed changes or refinements would need to be deliberated in the Registration Committee, which remains receptive and positive toward constructive improvements.



**Dr. Poonam Jasrotia**, ADG (Plant Protection & Biosafety), ICAR responding to the question raised on whitefly infestation, provided an overview of the emerging whitefly problem, which has recently been reported from Tamil Nadu, Karnataka, Kerala Andhra Pradesh and Telangana. The pest is causing serious damage in plantation and fruit crops including oil palm, arecanut, coconut, banana, mango, custard apple and others. Currently, approximately **1.5 lakh hectares** under coconut and oil palm are affected. Several ICAR institutes are actively working on solutions. Recently, **NBAIR, Bengaluru**, successfully demonstrated *Encarsia* parasitoids achieving up to **80% parasitization**. Also, a new **oil-based formulation** from the fungus *Aiseria pumirosa*, for which an application under **Section 9(3)** has been submitted, is expected to be registered soon. Similarly, **CPCRI, Kasaragod** and **CISH, Lucknow** are also engaged in parallel research efforts.

Dr. Jasrotia encouraged the industry to proactively generate data for emerging pest challenges, as has been done earlier for pink stem borer and piperonyl applications.

She cited the **Fiji virus outbreak** in Punjab and Haryana—transmitted by hopper pests—as a current urgent concern. She urged industry partners to accelerate development and evaluation of effective molecules to manage this serious disease.

### Status of Crop Grouping Initiative and MRL-Related Processes

Dr. Jasrotia noted that the **Crop Grouping initiative**, launched in 2013 under earlier ADGs and finalized by Dr. Dubey, continues to be fully supported by ICAR. She reiterated that **FSSAI is the custodian of MRL fixation**, therefore its concurrence is mandatory. The comments submitted by ICAR are currently under review by FSSAI. The matter was also discussed with DG, ICAR and DDG (Crop Science). The DDG (Crop Science) is attending ongoing FSSAI deliberations and will raise the issue at an appropriate forum. ICAR plans to wait for a short period and if no progress is observed soon, a formal communication from Secretary, ICAR to Secretary, FSSAI will be initiated.

## Concerns Regarding Import of Live Microbial Strains

Being a member of CIB&RC, CBC and the National Security Council (NSC), Dr. Jasrotia also explained the current national security concerns related to the import of live microbes. NSC meetings emphasise strict vigilance against potential biological threats. All scientific organizations, including ICAR, have been instructed to **scrutinize import requests for live microbes with utmost caution**, even for academic purposes. Given these concerns, negative recommendations had been given on several such requests. While acknowledging that countries like the USA, Japan, Canada and the EU conduct risk assessments and permit such imports, she observed that **India may not presently be fully prepared** for such risk-managed introductions. Instead, she encouraged industry to collaborate with ICAR institutes, which are continuously identifying promising indigenous microbial strains suitable for commercialization.

Dr. Jasrotia concluded that while the current stance on microbial imports may evolve based on national priorities and preparedness, her present recommendations reflect the existing security directives. She reiterated ICAR's commitment in supporting the crop protection industry, particularly on issues such as minor crop solutions, data generation and crop grouping.



**Dr. Vandana Tripathi**, Network Coordinator (AINP) & Scheme Incharge (MPRNL), All India Network Project on Pesticide Residues, ICAR provided an in-depth perspective on India's ongoing efforts to strengthen pesticide residue monitoring, crop grouping implementation and scientific risk assessment frameworks. She acknowledged the constructive tone of the session, reiterating that the platform is intended for collaborative problem-solving rather than grievances. With the presence of key stakeholders from CIB&RC, ICAR, FSSAI and industry, the forum offered an important opportunity to address longstanding regulatory and scientific challenges.

### Progress on Crop Grouping and Harmonisation Efforts

Dr. Tripathi shared encouraging updates on India's transition toward the crop grouping approach. All three earlier expert committees (led by Dr. T.P. Rajendran, Dr. Chakraborty and Dr. Dube) have endorsed the crop grouping methodology. Regulatory agencies across the value chain are aligned on the need for this shift, recognising its role in accelerating MRL approvals and improving international harmonisation. However, the primary challenge lies in **implementation**, particularly:

- ❖ The requirement from FSSAI to harmonise residue data with Codex norms, which currently mandates a **minimum of eight-location field trials**.

This requirement has become a key bottleneck and discussions are ongoing within FSSAI's scientific panels to find a pragmatic, science-based resolution and the topic remains a **high priority** and is expected to be taken up in the upcoming FSSAI meeting with the aim of enabling faster adoption.

The current findings from the **National Pesticide Residue Monitoring programme** were also highlighted by Dr. Tripathi.

- ❖ **35 laboratories** under AINP/MPRNL continue to generate extensive residue data across food commodities.
- ❖ Earlier monitoring of **groundwater** over a 10-year period showed **no detectable pesticide residues**.
- ❖ The programme has since shifted to **surface water monitoring**, where detections remain extremely low—around **0.2%** of samples and at minimal levels.
- ❖ Higher detections occur only in areas affected by **industrial effluents**, not agricultural pesticide use.

She added that India currently lacks specific guidelines for pesticide residues in non-drinking water sources. While WHO provides certain health-based guidance values, BIS is reviewing standards under its FAD 14 Committee and ICAR is actively contributing scientific inputs.

Dr. Tripathi also shared important results from the multi-year study undertaken jointly with CropLife India on **triple rinsing of pesticide containers**—a study for which no prior controlled scientific data existed globally. During the study, **15 formulations** across varying toxicity levels and packaging materials were tested under controlled conditions. The study demonstrated **very high removal efficiency**, achieving **up to 99.99%** removal of residues from containers. These findings align closely with EPA recommendations and reinforce triple rinsing as a reliable, science-backed practice. International guidelines suggest containers may be reclassified as *non-hazardous* if residual AI levels fall below **0.1%** after rinsing. She further added that her team is now correlating residue data with **aquatic and oral toxicity endpoints**, aiming to develop a holistic, globally aligned assessment framework.

#### Concerns on Absence of Protection of Regulatory Data (PRD)

**Mr. Rajesh Dhawan**, moderating the session, raised one of the most critical and long-standing issues for the crop protection industry—**Protection of Regulatory Data (PRD) for off-patent molecules**. Drawing from his decades of experience, beginning with the **Dr. Satwant Reddy Committee**, he noted that the sector has debated this subject for over a decade, yet meaningful reform remains elusive. He highlighted the fundamental challenge faced by companies investing **₹30–40 crore** to generate the full package of toxicology, efficacy, data for off-patent active ingredients. Despite heavy investment in stewardship-quality data, **any new entrant is** able to register a formulation within 6 months **and** a technical within 3 years, often with relaxed requirements *and* minimal data. This situation creates disincentive for companies investing in quality research and undermines innovation and responsible product introduction.

Mr. Dhawan also clarified a frequent misunderstanding on **Patent Protection and Data Protection**

- ❖ **Patent** protects the *molecule* and its intellectual property.
- ❖ **Data protection** safeguards the *investment made in generating scientific data* required for regulatory approval.

Most advanced regulatory systems—EU, US, Canada—maintain **both**, as they are independent but complementary mechanisms. Quoting global insights, he emphasized that **pipeline of new patented chemistry is shrinking**, partly due to Europe's increasingly stringent regulatory environment. Without data protection in India, Global companies hesitate to introduce new molecules and domestic companies lose incentive to invest in high-quality data generation.

He recalled that under the chairmanship of Dr. Kidwai, the then Additional Secretary, a committee was constituted to examine the issue. The committee had only **one meeting**. Despite initial traction, the process stalled. More recently, during meetings with senior govt. officials, industry was assured that the committee would be revived, but progress has yet to materialise. To break the deadlock, Mr. Dhawan proposed that the Ministry convene at least a **half-day structured discussion**, bringing together all the stakeholders including Government officials, CIB&RC experts, Industry representatives and scientific institutions. Such a session, is essential to clear misconceptions, articulate global benchmarks and align on a pragmatic model for **data protection in India**.



Dr. Subhash Chand provided a detailed historical and regulatory perspective on the evolution of India's Insecticide Act and its implications for data protection. The **Insecticides Act**—originally drafted in 1966 under the Ministry of Petrochemicals—underwent multiple transfers between Ministries before being implemented. The Act was subsequently moved to the Ministry of Health, where it remained for a year, before finally being transferred to the Ministry of Agriculture for implementation. Initially, regulatory considerations were centred primarily on registration and the concept of DRP (Data Requirement Protocols), which emerged much later. India's broader ecosystem did not have established frameworks for PRD or IPR in the context of pesticides during the period when the Act was conceptualized.

Dr. Subhash emphasized that regulators, are mandated to operate strictly within the **ambit of the existing Insecticides Act**, which currently provides no legal basis or scope for PRD. The Act, designed in the 1960s, did not envisage exclusivity provisions. Current regulatory guidelines also do not permit reliance on proprietary or primary data generated by one applicant for the benefit of another. Any move toward **exclusivity or PRD** would require legislative change and that regulators cannot introduce such measures independently. Recommendations of the **Parliamentary Standing Committee** are binding on regulators and constitute the only formal basis for reform unless the Act itself is amended. He noted that amendments to the Insecticides Act are currently under consideration by the Government. While refraining from commenting on recent developments, he reiterated that any future provisions for PRD must be anchored in changes to the Act or new legislation. Until such changes occur, the regulatory system remains obligated to operate within the existing statutory framework.

#### Steering the discussion on definition of a “New Molecule,”

Dr. Dhawan highlighted the critical role of regulatory efficiency in enabling the introduction of new crop protection technologies for Indian farmers. Industry sustainability is directly linked to product sales, which in turn depend on timely approvals and market launches. Ensuring farmers have access to cutting-edge solutions hinges significantly on the functioning and responsiveness of the regulatory system. He asked whether India currently has a formal definition of a “new molecule,” especially given the emerging priorities where categories such as nematicides, seed-treatment products and malaria-control chemicals often receive preferential consideration. He stressed the industry's desire for reduced procedural delays and fewer deficiency letters. Simplifying these processes would significantly accelerate access to innovative technologies for farmers.

Dr. Dhawan requested Dr. Subhash to outline his vision for enabling quicker introduction of new chemistries and solutions, while maintaining regulatory integrity. He urged that collective efforts be directed toward reducing bureaucratic hurdles and fostering a more facilitative ecosystem that supports innovation, farmer welfare and industry growth.



Dr. Subhash highlighted the importance of improving the speed and efficiency of regulatory decision-making, particularly concerning the processing of applications and the definition and prioritisation of *new molecules*. He acknowledged the industry's expectation for faster disposal of work and the need for regulatory systems to keep pace with emerging technologies and farmer requirements. Referring to the 8th Board Meeting held in 1976, he noted that the Central Insecticides Board & Registration Committee (CIBRC) Secretariat had a sanctioned strength of 38 positions and issued approximately 200 certificates annually, at a time when no substantial data requirements existed. In contrast, during the previous year, the Secretariat had issued nearly **100,000 certificates with only 58 personnel**, demonstrating a significant increase in workload and productivity. In the current financial year (from 1 April to date), **12,000 certificates** had already been issued.

He emphasised that while the regulatory team is committed to efficiency, further acceleration can only be achieved through technological interventions rather than additional manpower. Dr. Chand highlighted several initiatives under consideration:

- ❖ **e-KYC Integration:** Discussions have been initiated to integrate e-KYC to streamline submissions. Under the proposed system, basic applicant information—such as ownership details, board of directors and number of existing registrations—would automatically populate, eliminating the repeated submission of Aadhaar and other supporting documents.
- ❖ **Reduced Movement of Files:** Once e-KYC is operational, applications requiring amendments [such as 9(4) endorsements against an existing 9(3) registration] may not require referral to legal scrutiny, thereby reducing processing time.
- ❖ **Automation of Routine Notifications:** He cited the example of changes in toxicity classification colour codes for approximately 257 molecules. Rather than manually updating an estimated 7.76 lakh certificates, a **single general notification** could be issued to implement such changes across all registrations.

These technological upgrades would help the regulatory system match with global pace and expectations. However, without such reforms, additional human resources and logistical support would be necessary to manage the growing workload. He concluded by clarifying that the regulatory framework currently does not contain a **formal definition of a “new molecule”** and hence such criteria must be determined through policy deliberations by the competent authorities. The regulator's responsibility, he emphasised, is to operate strictly within the ambit of the existing Insecticides Act and guidelines, while continuously improving operational efficiency.

#### Discussion around Plastic Waste Management (PWM) Rules

Mr. Rajesh Dhawan raised a critical regulatory and environmental management concern relating to the **Plastic Waste Management (PWM) Rules** and their implications for agrochemical sector. He highlighted that earlier provisions allowed the use of **100% virgin plastic** for manufacturing containers. However, under the revised PWM Rules, companies are now mandated to incorporate a **defined percentage of recycled plastic**, with the required percentage increasing annually. Mr. Dhawan noted that this transition poses a unique challenge for the pesticide industry. Under current regulations, **used pesticide containers cannot be reused** for any purpose due to contamination risk. As per statutory guidelines, these containers must be **disposed of safely**, usually by burying them in a pit located away from human habitation and water bodies.



He further referred to international best practices, including the U.S. EPA guidelines, which endorse **triple rinsing** as an effective method for decontamination. Studies indicate that triple rinsing removes **99.99% of pesticide residues**, leaving only negligible traces (approximately 0.01%). Post-rinsing, such containers are considered safe for recycling in many countries.

Mr. Dhawan highlighted that **CropLife India had initiated a project on triple rinsing**, led by Dr. Vandana Tripathi. He requested Dr. Tripathi for an update on (i) whether India is ready to adopt triple-rinsed pesticide containers for recycling, (ii) The regulatory progress made so far under PWM Rules, (iii) Any pending challenges that prevent full-scale implementation and (iv) The future roadmap for harmonizing environmental and agrochemicals regulations

**Dr. Vandana Tripathi** provided an update on the ongoing work related to the Plastic Waste Management Rules and the feasibility of recycling pesticide containers through the triple-rinsing method. The **triple-rinsing project**, undertaken with the support of CropLife India, is now nearing completion, with the final report under preparation. Initially, there was **no published scientific evidence**—either from India or internationally—where the efficacy of triple rinsing had been validated under **controlled laboratory conditions** for pesticide containers. While the US EPA had issued general guidelines, these lacked experimental validation for Indian conditions. To address this gap, the research team tested **15 different formulations**, covering a wide range of toxicity categories, formulation types and packaging materials. The findings were described as highly encouraging:

- ❖ For most formulations, the **removal efficiency reached 99.99%**, closely aligning with international expectations of residue removal through triple rinsing.
- ❖ Only a few formulations showed slightly lower efficiencies, which are being evaluated further.

Dr. Vandana also highlighted ongoing consultation with global experts. International hazard-classification frameworks specify that used containers can be reclassified as *non-hazardous* if the **active ingredient residue is reduced below 0.1%**. The Indian study team is now undertaking calculations to correlate residue levels after triple rinsing with these global reclassification benchmarks.

As a **way forward**, she emphasized the need to:

- ❖ Correlate residue data with available toxicity data, including aquatic toxicity and oral toxicity, to create a comprehensive scientific justification for recycling.
- ❖ Conduct further interpretation and modelling to assess potential human and environmental risk from trace residues.
- ❖ Involve the Ministry of Environment, Forest and Climate Change, as their participation will be essential for future regulatory acceptance of triple-rinsed pesticide containers as recyclable material.

### Repeated Bans on Crop Protection Molecules and Implications for Basmati Rice Exports

During the session, industry leaders and regulatory representatives also discussed the long-standing challenge of pesticide-related restrictions imposed on Basmati rice cultivation and exports. The debate centred around recurring bans issued by exporters' associations and the Government of Punjab, the absence of harmonised Maximum Residue Limits (MRLs) in key markets and delays in the approval of new molecules essential for residue management and export compliance.



**Mr. Nand Kishore Agarwal** Chairman, Crystal Crop Protection Limited highlighted a significant contradiction affecting India's rice export ecosystem. The molecules being triggered for ban by exporters' associations are duly registered by CIB&RC, with MRLs established in India.

He underscored that the core challenge lies in absence of MRLs in importing countries, not by misuse by farmers. Industry bodies, chambers of commerce, rice exporters and pesticide associations—collectively developed a Package of Practices (PoP) for safe and responsible use in Basmati rice and was submitted to PAU and HAU for validation. Mr. Agarwal also raised concerns regarding delays in approval of new, cleaner and globally-accepted molecules due to incomplete studies or procedural constraints.

Dr. Subhash Chand informed the panel that the issue has been repeatedly deliberated in Registration Committee (RC) meetings. The RC has formally requested the Government of Punjab to provide scientific rationale and technical data supporting the bans, any R&D, field trials or residue studies conducted by the state government. However, responses have been **irregular, delayed, or incomplete**, highlighting deeper administrative gaps. The matter is now before the Punjab and Haryana High Court and stay has been granted.



**Mr. Manoj Lingeri**, Co-Lead Regulatory Affairs Committee, CropLife India & Head Regulatory Science, India, Bangladesh, Sri Lanka, Bayer CropScience Ltd provided a concise and structured summary of the extensive discussions held during the session, noting that the deliberations covered both longstanding and emerging regulatory challenges. He expressed appreciation for the constructive engagement from all panelists and regulators and highlighted key takeaways.

- ❖ Industry has been encouraged to submit a detailed representation on challenges faced under the import-for-export framework, enabling further deliberations with relevant authorities.
- ❖ The current Insecticides Act does not provide scope for introducing data protection provisions; however, there is a need for inter-ministerial consultation to explore long-term solutions.
- ❖ The emerging pest challenges, data-backed proposals would be accorded priority consideration by regulators.
- ❖ Crop Grouping is now under discussion with FSSAI. Response from regulators has been positive, but implementation challenges remain.
- ❖ **Groundwater monitoring under the INP programme has not detected pesticide residues**, enabling the programme to shift focus to surface water.
- ❖ **Surface water monitoring has also shown minimal residue detection**, reinforcing confidence in current agricultural practices.
- ❖ He emphasized that such scientific evidence is critical to counter misinformation and promising results obtained from the **triple rinsing project**, which indicate strong potential for **reclassifying triple-rinsed pesticide containers as non-hazardous**.
- ❖ The newly developed guidelines on pesticide use in Basmati rice now include **industry representation**, ensuring that all perspectives are incorporated in policy recommendations.



**Mr. Ravi Hegde**, Director, CropLife India presented the Vote of Thanks, expressing deep appreciation to the distinguished panel and participants. Mr. Hegde conveyed heartfelt gratitude to Dr. Vandana, Dr. Poonam and Dr. Subhash for their candid insights, transparency and constructive suggestions, which significantly enriched the dialogue. Dr. Subhash has recently taken charge of CIB&RC, but his long-standing association with the regulatory system and his transparency and straightforward communication inspire confidence across industry stakeholders. Special thank was extended to session moderator, Mr. Rajesh Dhawan for steering the discussion with a balance of clarity, humour and precision—ensuring that all critical industry concerns were addressed effectively. Appreciation was also conveyed to Mr. Amiya Bartia for initiating the session and to Mr. Manoj Lingeri for his succinct and comprehensive summary. Mr. Hegde concluded by thanking all delegates and participants for their active engagement and reiterated CropLife India's commitment to strengthening agriculture as a strategic pillar in the national vision for **Viksit Bharat 2047**.

# NATIONAL CONFERENCE 2025

Viksit Bharat 2047 - One Trillion Contribution by the Agriculture to the Economy  
*Role of Crop Protection Industry*

26<sup>th</sup> September 2025  
New Delhi

Outreach Partner



Media Partners



## PANEL DISCUSSION

**"Empowering Farmers, Navigating Compliances & Global Standards: A State-wise View of the Agri Input  
(Crop Protection & Bio-stimulants) Industry & Export"**

## PANEL DISCUSSION

### "Empowering Farmers, Navigating Compliances & Global Standards: A State-wise View of the Agri input (Crop Protection & Bio-stimulants) Industry & Export"



**Mr. Rahul Dhanuka, Board Director, CropLife India**

Mr. Rahul Dhanuka extended a warm welcome to all participants and expressed his privilege in addressing a distinguished panel comprising **Dr. P. K. Singh**, Agriculture Commissioner and Chairman of the Registration Committee; **Dr. T. M. Tripathi**, Joint Director Agriculture, Uttar Pradesh; **Mr. Gaurav Shishodiya**, Vice President, Invest India; and the session moderator, **Mr. Raju Kapoor**.

To set the context for the discussion, Mr. Dhanuka illustrated the importance of regulatory harmonization through a relatable example. He highlighted how the European Union's 2022 decision to mandate **USB-C chargers as a uniform standard** resulted in significant consumer savings and reduced e-waste. India is also moving toward similar uniformity, effective

2025-26. This, he noted, exemplifies how aligned regulations across jurisdictions can simplify processes and benefit stakeholders.

Drawing a parallel from the agricultural sector, he recalled a time when agrochemicals in Punjab were taxed at **zero VAT**, while Haryana levied **5% VAT**. The disparity led farmers from Haryana and Uttar Pradesh to cross state borders to purchase agrochemicals from Punjab. Under the leadership of **Dr. P. K. Singh**, nearly **7,000 registrations** were cancelled due to inadequate KYC compliance—an important step toward greater regulatory discipline. However, he emphasized that the effective implementation of such decisions depends on **strong coordination between the Central regulator and State enforcement agencies**.

Referring to discussions from the preceding session, Mr. Dhanuka pointed to the ongoing challenges arising from the **Adhoc ban on 12 agrochemicals for paddy and basmati rice**. He noted that the lack of synergy between the Central Regulatory Authority and regional authorities continues to create confusion and inefficiencies for the industry.

As he concluded, Mr. Dhanuka remarked that the central objective of the panel discussion was to explore how improved coordination between regulators and executive agencies could enhance **Ease of Doing Business**, strengthen India's investment climate and support a more efficient regulatory ecosystem.

**Session Moderator - Mr. Raju Kapoor, Lead – State Affairs Committee, CropLife India and Director, Public and Industry Affairs, FMC India Pvt. Ltd.**

Mr. Kapoor acknowledged the persistent apprehensions within certain sections of government and society regarding the perceived risks or potential adverse environmental or health impacts of pesticides. He pointed out that while the importance of crop protection products is well recognized, scepticism continues to influence policy approaches, including the growing emphasis on natural farming and reduced chemical usage.

Given that the session time was shortened, Mr. Kapoor proceeded directly to pose the first question to the distinguished panel. Addressing **Dr. P. K. Singh, Agriculture Commissioner**, he offered congratulations for the remarkable achievements of Indian agriculture under his leadership. He further observed that despite record agricultural performance, hesitation persists within policy circles regarding pesticide usage.

He requested Dr. Singh to articulate the government's perspective on:

- ❖ Approach to crop protection chemical use,
- ❖ Balance between promoting natural farming and ensuring effective pest management
- ❖ Expectations from the crop protection industry in strengthening trust, safety and regulatory alignment.

**Special Address by Session Chair, Dr. P. K. Singh, Agriculture Commissioner, Government of India**

Dr. P. K. Singh provided a comprehensive overview of the Government of India's strategic priorities for strengthening the agriculture sector in the run-up to **Atmanirbhar Bharat 2047**.

He reiterated that the Ministry's core objective is to ensure national self-reliance by 2047 and this requires a holistic and integrated approach across the entire agricultural value chain. Achieving this vision entails strengthening every fundamental component of crop production—ranging from **seed quality, fertilizers, crop protection chemicals, irrigation systems, to post-harvest infrastructure.**

### Balanced Role of Crop Protection



**Dr. P K Singh** clarified that the Government does not intend to side-line agrochemicals. Instead, pesticides, fertilizers, bio-stimulants and other inputs remain **critical enablers** of productivity, especially when used responsibly and supported by improved regulatory oversight. Challenges exist across all input categories, he noted and the Government is committed to continuous improvement to ensure quality, safety and efficacy.

### Productivity, Sustainability and Farmer Income

Sustainable agriculture requires a dual approach—**reducing the farmer's cost of cultivation while doubling incomes at regular intervals.** This cannot occur without strengthening all production inputs and improving access to technology, precision irrigation, improved varieties and science-led crop protection solutions. High-quality seeds remain the foremost driver of productivity, around which other inputs—including pesticides—play a complementary and essential role.

### Digitisation and Agri-Tech Integration

Highlighting the ambitious digital transformation underway, Dr. Singh outlined major initiatives:

- ❖ **Agri-Stack Development:** A comprehensive digital ecosystem where each farmer receives a unique digital ID, enabling personalised advisory based on landholding, soil, crop choice and resource availability.
- ❖ **National Pest Surveillance System (NPSS):** Farmers can upload geo-tagged photographs of pest or disease incidence, enabling real-time diagnosis and recommendations, along with information on nearby input suppliers.
- ❖ **Digitalisation of Regulatory Processes:**
  - ❖ Efforts are underway to digitise GLP dossiers, making evaluation more efficient through AI-assisted tools.
  - ❖ Legacy certificates issued in the 1990s will be recalled, standardised and re-issued in secure digital formats with automated endorsement updates.
  - ❖ This transition will significantly enhance transparency, traceability and administrative efficiency.



## Addressing Regulatory Workload and Capacity

Dr. Singh acknowledged challenges such as the surge in registration applications and the immense workload involved in reviewing tens of thousands of pages of GLP data. Greater use of digital systems, technology-based review mechanisms and structured manpower support from the Government are being explored to strengthen the Registration Committee's operational capacity.

In closing, Dr. Singh reaffirmed that **every layer of the agriculture ecosystem is being strengthened** to make Indian agriculture more productive, resilient and globally competitive. The Government remains committed to working with all stakeholders—including industry—to achieve the shared national goal of a self-reliant, technologically advanced agricultural sector by 2047.

Mr. Raju Kapoor, further sought the Agriculture Commissioner's guidance on Industry–Government alignment, public perception and communication.

Mr. Kapoor requested the Agriculture Commissioner's advice on how the industry could more effectively and transparently communicate the importance, benefits and responsible-use practices of crop protection products to government stakeholders. He emphasized the need for a constructive framework that helps neutralize misinformation and enables a balanced, science-driven narrative going forward.

## Response of Dr. P. K. Singh, Agriculture Commissioner, Government of India

Dr. P. K. Singh, Agriculture Commissioner, acknowledged that addressing the widespread perceptions around pesticide use remains a complex challenge. He illustrated this by drawing a parallel with India's oilseed mission. Despite the nation's aspiration to become self-reliant in edible oils—currently importing ₹1.6 lakh crore worth of oil annually—consumer behaviour has not aligned with global recommendations. Against the WHO's per-capita recommendation of 12 kg of edible oil per year, India's actual consumption stands at 19 kg.

He emphasised that a similar pattern exists in the discourse on pesticides. When analysed in proportion to cropped area, India's pesticide usage is significantly lower than many other countries. However, communicating this balanced perspective to the public remains difficult.

Dr. Singh noted that the solution does not lie in promoting pesticides as a product category—much like medicines such as paracetamol are not promoted but consumed based on need. Pesticide use is a *felt need* for farmers and overuse or misuse arises not from marketing but from behavioural patterns and information gaps. For example, farmers often undertake “neighbourhood spraying”—a tendency described by the Minister as *“If Ramlal sprays, Shyamlal also sprays.”*

He reiterated that once the Government's Agri-Stack ecosystem is fully implemented, more precise and need-based application can be guided. With data on crop variety, field conditions and pest risks, farmers can be advised whether a spray is actually required or whether a resistant variety would suffice. Such digitisation will ensure pesticides are used only where necessary and in minimal, optimal quantities.

Dr. Singh added that market dynamics are increasingly influencing choices—whether in organic farming, natural farming, or bio-pesticides. If consumers pay a premium for organic produce, farmers will naturally adopt those systems. Likewise, if bio-pesticides demonstrate efficacy, farmers will use them of their own accord. Effective technologies do not require heavy advertising.

He, however, urged the industry to take stronger responsibility at the retail level. Retailers must be sensitised and regulated within industry networks. Tracking whom a product is being sold to, ensuring that large consignments are not diverted elsewhere and identifying retailers involved in malpractice or sale of spurious products are essential steps. The industry, he suggested, should actively flag and remove such retailers from their supply chains, while the Government examines mechanisms to close down outlets engaged in violations.

Dr. Singh concluded that responsible stewardship, retailer-level discipline, improved data systems and precise advisories will together help reduce misuse, correct public perceptions and strengthen trust in crop protection products.

## Centre–State Divergence in Interpretation and Enforcement of Pesticide Regulations

Mr. Raju Kapoor, raised a critical issue concerning the divergence in interpretation and implementation of pesticide regulations by the Centre and various State Governments. Mr. Kapoor citing a recent example, noted that certain pesticides—recommended specifically for use on basmati rice—were prohibited in Punjab without adequate scientific justification. Subsequently, due to perceived pressure or alignment, Uttar Pradesh also proceeded to ban the same products. The industry had to seek judicial intervention, following which the Hon'ble Court quashed the ban in Uttar

Pradesh. However, Mr. Kapoor highlighted that by the time such bans are overturned, the damage to supply chains, farmer confidence and export markets is already done.

He further elaborated that, in Punjab's case, the matter had dragged on for nearly four years, during which courts repeatedly questioned the State's inability to either substantiate the ban with scientific evidence or to withdraw it. This, he said, reflected poorly on the systems of regulatory coordination.

In view of such recurring challenges, Mr. Kapoor sought the Agriculture Commissioner's guidance on whether a mechanism could be institutionalized to ensure:

- ❖ **Common and harmonized interpretation of the pesticide regulatory framework across Centre and States,**
- ❖ **Pre-action consultation or technical review,** enabling States to engage with the Central regulator before issuing abrupt or unilateral orders and
- ❖ **Timely corrective action** to prevent damage to farmers, the industry and export competitiveness.

He stressed that harmonization of regulatory understanding would reduce policy unpredictability, prevent unnecessary litigation and reinforce confidence among domestic and global stakeholders. Mr. Kapoor added that greater alignment between the Central Insecticides Board & Registration Committee and State agriculture departments would significantly contribute to ease of doing business and strengthen the scientific integrity of regulatory decisions.

#### **Response of Dr. P. K. Singh, Agriculture Commissioner, Government of India**

The Agriculture Commissioner acknowledged the structural complexities inherent in implementing a decades-old legislation. He noted that the **Insecticides Act is an old statute** and over time, **every provision has been debated extensively**. However, despite legal clarity, India's **institutional diversity** often results in variations in interpretation and enforcement across States. *"India is a country of diversity; if a State does not wish to understand the legal position, it simply will not,"* he observed, underscoring that such divergence persists even when the statutory language leaves little room for ambiguity.

Citing a contemporary example, he highlighted the implementation challenges witnessed after the **notification of bio-stimulants under the Fertilizer Control Order (FCO)**. Several States had initiated compliance processes, yet **4-5 States continued to resist**, insisting on their own procedures. Even in Uttar Pradesh, he noted, the issuance of manufacturing licences under the new framework had not commenced. Such examples illustrated that **harmonisation is not always a matter of legal clarity but often of administrative willingness**.

The Commissioner stressed that **there is no simple or immediate solution** to these inter-Governmental coordination gaps. However, he urged continued engagement and sensitisation efforts to ensure States align with central regulatory intent.

Addressing an associated point raised by the Moderator on **triple rinsing and container disposal**, he cautioned that well-intentioned initiatives can inadvertently generate significant compliance burdens. Once triple rinsing practices are formalised, **questions of waste water disposal, contamination levels, treatment processes and environmental compliance** will inevitably arise. *"Where is this water going? How is it being treated? Is it entering the river system?"* – These, he emphasised, are the types of issues that could quickly escalate into enforcement and litigation challenges.



He concluded by reiterating that these complexities are a part of the **larger regulatory ecosystem**, where every intervention has cascading implications that must be carefully anticipated and managed.

Inviting the perspective of the State Government, *Mr. Raju Kapoor* requested **Shri T. M. Tripathi** to share his views on the regulatory decisions taken at the State level. He noted that farmers fall directly under the purview and responsibility of the State Governments, which often compels them to take tough and immediate decisions in response to farmer grievances and public pressure.

Mr. Kapoor observed that, at times, such decisions—though well-intentioned—may adversely impact the crop protection industry, leading to uncertainty or disruption in business operations. He therefore posed a key question to Shri Tripathi:

Is there a constructive mechanism through which such situations can be pre-empted or addressed through dialogue, collaboration and mutual understanding between the State Governments and the industry, so that sudden regulatory actions can be avoided and issues resolved through a consultative process?



**Shri T. M. Tripathi, Joint Director – Agriculture, Government of Uttar Pradesh**

Shri T. M. Tripathi began by expressing his appreciation for the opportunity to address the gathering and thanked the organizers for inviting him to the platform.

He clarified that what is often perceived as a *pesticide ban on Basmati* is, in reality, **not a blanket ban, but a restriction on the use of certain pesticides in Basmati cultivation**. The restriction does not prohibit the sale or production of these pesticides; rather, it aims to encourage more responsible stewardship. This, he emphasized, should be viewed as an opportunity for the pesticide dealers, retailers and the industry to intensify farmer awareness on correct and judicious pesticide usage.

Shri Tripathi highlighted a structural challenge within the current **retailer business model**, wherein retailers receive incentives based on **higher sales volumes**, not on **accurate dosage guidance**. This creates an inherent conflict: in many cases, when a farmer requires 20 ml of a product, the retailer encourages the sale of 200 ml. Some retailers resort to selling pesticide “cocktails” or combinations simply to achieve higher turnover. This situation, he observed, necessitates the industry's proactive intervention.

To address this, Shri Tripathi proposed a **structured retailer training framework**, comprising two clearly defined modules:

- ❖ **Part A – General Information on the Molecule:** Covering essential details such as pre-harvest intervals, recommended application practices, potential side effects and safe-use protocols.
- ❖ **Part B – Brand-Specific Properties:** Providing information on product attributes unique to each company's formulation or brand, enabling retailers to guide farmers more responsibly.

He further drew attention to the emerging challenge of **drone-based pesticide application**. Traditional application requires 200–500 litres of water per hectare, whereas drones function with as little as 10 litres per hectare. This significant shift in volume necessitates *precise communication* of correct dosage and application protocols to farmers, drone service providers, retailers and field actors. The industry, he emphasized, must take responsibility for ensuring accurate and consistent messaging.

Turning to pricing issues, Shri Tripathi highlighted the confusion emerging from **disproportionate MRPs for identical molecules and similar products** offered by different companies. These variations, combined with extensive discounting practices, often create misunderstanding among farmers and retailers, ultimately resulting in complaints that reach the State Government. He further noted the **GST-related confusion**: when a product with an MRP of ₹1,000 is sold at a 50% discount, GST is applied on the net billed amount, whereas MRP-based pricing already includes GST. These inconsistencies, he stressed, adds to the overall opacity in the pricing structure.

In closing, Shri Tripathi underscored the need for **greater transparency, stronger stewardship and consistent dosage guidance** across the value chain—from industry and retailers to farmers—to ensure responsible pesticide use and enhanced trust among stakeholders.

Opening the discussion on investment opportunities within India's agrochemical sector, **Mr. Raju Kapoor** invited **Mr. Gaurav, Vice President, Invest India**, to address industry concerns and outline potential support mechanisms for enhanced domestic and global investment in the sector.

Mr. Kapoor observed that, although the industry has made notable progress, **the scale of current investment remains far below its true potential**. He emphasized that significant opportunities exist for both Indian and multinational companies to expand capacities, set up new manufacturing bases and bring global-scale molecules to India. However, he pointed out that **the expected level of investment is not forthcoming** and stakeholders are seeking clearer signals and incentives from the government ecosystem.

Referring to the broader investment landscape, Mr. Kapoor highlighted that **Invest India serves as the national investment facilitation and promotion agency**, actively working to attract global capital and strengthen domestic manufacturing in line with the **Make in India** mission. He commended the agency's role, noting his close professional engagement with its teams.

Mr. Kapoor then articulated key concerns voiced by industry members:

1. **Cost Differential:** A significant gap persists between the costs of producing agrochemicals in India versus other geographies. This remains a deterrent for manufacturers evaluating large-scale investments.
2. **Upstream Dependencies:** The Indian industry continues to rely heavily on imports—particularly from China—for intermediates and raw materials. This structural dependency weakens supply chain resilience and undermines India's competitiveness as a global production hub.
3. **Incentives for Global Manufacturing:** Recalling a suggestion raised earlier in the day, Mr. Kapoor asked whether **Production-Linked Incentive (PLI)-type schemes** could be considered for companies that bring global molecules for manufacturing in India. Such incentives, he felt, could attract anchor investments and strengthen India's position in global value chains.
4. **Support for Expat Professionals:** Mr. Kapoor noted that multinational companies often deploy expatriate specialists in India. However, these expats **do not receive the same level of recognition, facilitation, or ease of operation** that Indian professionals typically enjoy when placed abroad. Addressing this gap could improve investor confidence and ease of doing business for global firms.

Mr. Kapoor invited **Mr. Gaurav** to share Invest India's perspective on these issues and to outline possible policy instruments, facilitation services, or incentive structures that could encourage greater domestic and foreign investment in India's agrochemical manufacturing ecosystem.





### Mr. Gaurav Shishodia, Vice President, Invest India

Gaurav Shishodia expressed his gratitude to CropLife India for the invitation and outlined **Invest India's** pivotal role as the **national investment promotion and facilitation agency** of the Government of India. He emphasized that Invest India acts as a vital bridge between **Industry and Government**, working to **facilitate investments, resolve operational challenges and drive policy reforms** across both central and state levels.

He elaborated that Invest India supports domestic and international companies throughout their investment journey—helping them **identify market opportunities, select suitable states for operations, navigate regulatory frameworks and establish collaborations** through joint ventures and research partnerships. He stressed that Invest India functions as a *facilitator rather than a regulator*, ensuring smooth coordination among key Government departments such as the **Ministry of Agriculture and Farmers' Welfare, FSSAI and the Ministry of Health**, among others.

Acknowledging that the **agri-input sector** has not received the same policy focus as other industries in the past, Shishodia affirmed that this area is now a **priority for Invest India**, given its strategic importance to national agricultural growth. He recalled working closely with **CropLife India** on regulatory matters, including approvals from **CIBRC and FSSAI** and proposed a collaborative meeting with industry representatives to identify and address key sectoral challenges.

On the subject of **investment incentives**, he explained that most are offered at the **State level**, ranging from capital subsidies and interest subvention to utility reimbursements. For **large-scale and mega projects**, States may also provide **customized incentive packages**. At the national level, he cited the **Production Linked Incentive (PLI)** scheme as a mechanism to offset cost disadvantages and strengthen global competitiveness, encouraging the industry to present **data-backed representations** to the Government for consideration.

Highlighting the direction from India's **top leadership**, including the **Hon'ble Prime Minister**, Mr. Shishodia noted the increasing emphasis on building stronger linkages between **industry and farmers**. He shared that major global FMCG companies have been encouraged to integrate with farmer networks, support initiatives such as the **'Drone Didi'** program and educate farmers on sustainable and responsible input usage.

In conclusion, Shishodia underscored the need to **reshape public perception** of the crop protection industry through **collaboration among government, academia and farmers**. He urged the sector to leverage **Make in India opportunities** by localizing production of imported products and working with Invest India to develop a **comprehensive investment roadmap** aimed at boosting domestic manufacturing, innovation and agricultural resilience.

### Management of expired pesticide stocks

Dr. P. K. Singh began by reflecting on a broader mind set challenge within regulatory and operational ecosystems. Citing Shri Nitin Gadkari's observation that *"some people create problems in opportunities, while others find opportunities in problems"*, he emphasized that the industry must actively cultivate the latter approach.

Addressing the concern on **management of expired pesticide stocks**, Dr. Singh noted that the issue requires a structured and systematic study. He suggested that the industry should assess whether expired products or their components could be reused, repurposed, or collected through scientifically validated processes. He underscored the need for companies to **collect all expired containers and maintain proper records**, including documentation procedures for any potential reuse. Clear guidance must also be provided to users on how such containers or materials should be handled and returned.

Dr. Singh further highlighted that, in the absence of viable alternatives, **high-temperature incineration** remains the Government-mandated last resort. He referenced the example of cyanamide stock incineration in Bhopal to illustrate that Government-approved facilities, while available, impose a cost on industry—both for compliance and for the physical destruction of materials. Should the industry identify a scientifically sound and environmentally safer solution, he emphasized that such an approach would be preferable and welcomed.

Turning to the issue of **triple rinsing**, Dr. Singh clarified that pesticide containers currently fall under the **hazardous waste category** and the Ministry of Environment has not yet removed them from this classification. As a result, practical implementation of triple rinsing on a national scale remains constrained. He informed participants that efforts to secure this regulatory change have been ongoing for 4–5 years and only once this amendment is made can the rinsing-and-reuse model advance meaningfully.

Dr. Singh concluded by reiterating that progress on both expired stock disposal and triple rinsing requires **regulatory alignment, industry initiative and practical innovation**, urging stakeholders to contribute actively to developing more sustainable, compliant and realistic solutions.



**Ms. Neetu Kapasi, Board Director, CropLife India**

Ms. Neetu Kapasi delivered the Vote of Thanks, expressing deep appreciation on behalf of CropLife India to all participants. She noted with gratitude that despite the session extending beyond 5:00 p.m., the hall remained full—reflecting the collective commitment of the stakeholders present.

She conveyed sincere thanks to:

- ❖ **Dr. P. K. Singh**, Session Chair, for his inspiring guidance and clarity on the key issues deliberated.
- ❖ **Mr. Raju Kapoor**, Moderator, for steering the discussion with precision, ensuring focus, structure and impact.

❖ **Dr. T. M. Tripathi and Mr. Gaurav Shishodia**, esteemed panellists, for sharing valuable insights grounded in field realities and investment perspectives.

❖ **Mr. Rahul Dhanuka**, for his leadership in opening the session and setting a sharp, forward-looking tone.

Ms. Kapasi highlighted **three key takeaways** from the session:

1. **Path to Self-Sustainability by 2047:** Echoing Dr. P. K. Singh's observations, she emphasized that achieving long-term sustainability requires strengthened and continuous efforts from both industry and stakeholders, supported by several progressive government initiatives already underway.
2. **Navigating Diversity Across States:** Acknowledging India's inherent diversity in agricultural practices and regulatory interpretations, she noted that these complexities cannot be resolved overnight. However, sustained focus on farmer-centric stewardship, ethical sales practices, appropriate pricing and capacity-building at the retailer level can help bring greater alignment.
3. **Partnership with Invest India:** Ms. Kapasi underlined that the industry now has a strong partner in **Invest India**, whose collaborative approach can help connect the agrochemical sector not only with the Ministry of Agriculture but also with allied ministries and departments critical to the sector's growth.

In conclusion, she reiterated that **farmers, industry, academia and government must continue working in close partnership** to strengthen India's crop protection ecosystem and advance towards a more self-reliant future. She thanked all participants once again for their presence and engagement.



## MODERATOR



**MR. PRABHU CHAWLA**  
EDITORIAL DIRECTOR  
NEW INDIAN EXPRESS



**MR. SAHIN OZKAN**  
HEAD OF COMMERCIAL UNIT  
ADAMA ASIA PVT. LTD.



**MR. SIMON WIEBUSCH**  
CEO, BAYER CROP SCIENCE LTD AND COUNTRY  
DIVISIONAL HEAD, BAYER CROPS SCIENCE  
INDIA, BANGLADESH AND SRI LANKA



**MR. SUBROTO GEED**  
PRESIDENT - SOUTH ASIA  
CORTEVA AGRISCIENCE



**MR. ANKUR AGGARWAL**  
MANAGING DIRECTOR  
CRYSTAL CROP PROTECTION LTD.



**MR. SUSHEEL KUMAR**  
MANAGING DIRECTOR  
SYNGENTA INDIA PRIVATE LTD.



CropLife India National Conference 2025

CEO's Panel Discussion: "Pesticides - Villain, Hero or Scapegoat?"

## CropLife India National Conference 2025

### CEO's Panel Discussion: "Pesticides - Villain, Hero or Scapegoat?"

The Special Session, CEO's Panel Discussion, brought together some of the most influential leaders of India's crop protection industry. Designed as an unfiltered and insightful *fireside chat*, the session critically explored one of the most widely debated questions in agriculture today:

#### Are pesticides the villain, the hero, or the scapegoat in the story of Indian farming?

The panel was masterfully moderated by senior journalist **Mr. Prabhu Chawla**, who guided a thought-provoking and wide-ranging discussion. The distinguished panellists included:

- ❖ **Mr. Ankur Aggarwal**, Chairman, CropLife India and MD, Crytal Crop Protection
- ❖ **Mr. Sahin Ozkan**, MD, Adama India
- ❖ **Mr. Simon Weibusch**, CEO & MD, Bayer CropScience
- ❖ **Mr. Subroto Geed**, MD, Corteva Agriscience India
- ❖ **Mr. Susheel Kumar**, MD, Syngenta India

#### Setting the Tone: Perceptions, Priorities and Policy

Opening the discussion, Mr. Prabhu Chawla highlighted the long standing tension surrounding pesticides – often viewed as essential by farmers but misunderstood or vilified in public discourse. He pointed to the broader policy landscape where aspirations for organic farming frequently collide with India's urgent need to boost agricultural productivity.

Panellists agreed that the debate should not be framed as "**organic vs. agrochemicals**", but as **how India can ensure affordable, nutritious and abundant food for 1.7 billion people by 2047**.

#### Pesticides: Neither Villain nor Hero – but Vital Allies

Addressing the central question, the CEOs emphasized that pesticides are neither heroes nor villains; when used responsibly, they are **critical allies** for farmers. Much like medicines in human health, crop protection products prevent devastating yield losses that can reach **up to 40%**, safeguarding farmer income and national food security.

They stressed that global organizations, including FAO, have consistently highlighted the role of pesticides in addressing pest- and disease-driven losses estimated at nearly **₹2 lakh crore annually** in India.

#### Global & National Context: India's Rise as an Agrochemical Powerhouse

The discussion underscored India's emergence as one of the world's fastest-growing crop protection markets and a future manufacturing hub.

Key observations included:

- ❖ India's agrochemical consumption remains among the **lowest globally**, even as the perception of "overuse" persists.
- ❖ A strong manufacturing base and a supportive government framework have positioned India as a trusted global supplier.
- ❖ The nation requires a balanced approach – combining organic, biological and chemical solutions – for sustainable agricultural transformation.

#### Policy, Regulation and the Need for an Innovation-Led Framework

The panel delved into regulatory expectations arising from the **Pesticide Management Bill (2020)**, drone application guidelines and the ongoing shift toward modernization.

They emphasized:

- ❖ The need for **science-based, predictable and facilitative regulation**.
- ❖ Encouraging innovation through faster registration pathways for **new molecules and biologicals**.
- ❖ Aligning regulatory reforms with the larger economic vision of **Viksit Bharat 2047**, including 'Make in India' and export growth.

### Farmer Education: The Industry's Backbone

All panellists echoed a common priority: **farmer education and stewardship** must remain at the core of industry efforts. From field demonstrations to digital advisory platforms, companies collectively reach millions of farmers every year.

Key areas of focus include:

- ❖ Correct dosage and timing
- ❖ Safe spraying practices
- ❖ Use of protective equipment
- ❖ Residue management
- ❖ Weather-based application advisories

The CEOs stressed that **trust-building**—not just information dissemination—is essential to empower farmers.

### Tackling Misinformation: Ground-Level Realities

The panel candidly acknowledged the challenge of misinformation propagated through social media, word-of-mouth networks and fragmented communication channels.

They emphasized:

- ❖ The importance of **listening first**, addressing farmer fears proactively.
- ❖ Delivering communication in **local languages** and through **farmer-led testimonials**.
- ❖ The need for consistent, multi-channel engagement to counter myths and strengthen scientific understanding.

### Chemistry + Biology + Technology: The Future of Crop Protection

The convergence of chemistry, biologicals and digital agriculture formed a central theme of the conversation.

The CEOs shared that the next leap in crop protection will be defined by:

- ❖ **Integration** - Combining biologicals with modern chemistries to enhance efficacy and environmental safety.
- ❖ **Innovation** - Investing in new molecules, green chemistry, precision technologies and drone-based applications.
- ❖ **Information** - Leveraging advisory services, AI-driven insights, remote sensing and weather data.
- ❖ **Inspiration** - A collaborative approach involving government, academia, industry and farmers.

Farmers today, they said, want **solutions—not individual products**—and the future lies in integrated pest management and outcome-oriented advisory.

### Collective Industry Responsibilities

When asked what the industry must collectively prioritize, the CEOs identified four central pillars:

1. **Farmer education and stewardship**
2. **Combating counterfeits and illegal pesticides**, which undermine farmer safety and national credibility

3. Building a science-backed public perception through transparent and responsible communication
4. Defining a common North Star aligned with national development goals

### Vision 2047: The Future Landscape of Indian Crop Protection

The session converged on a shared vision for the sector's future:

- ❖ Greener, more regenerative and sustainability-driven
- ❖ Digital-first, precision-focused and technology-enabled
- ❖ Strongly aligned with Make in India and a global export footprint
- ❖ Anchored in innovation, reliability and farmer trust

### Closing Messages

#### To Farmers:

*"We stand with you. Trust science, follow responsible use practices and know that your safety and prosperity remain our highest priority."*

#### To Government:

*"We seek a strong, science-based regulatory framework that fosters innovation, helps farmers adopt better practices and positions India as a global leader in sustainable agriculture."*

### Conclusion

The CEO Panel reaffirmed that while misconceptions and communication gaps persist, the crop protection industry is committed to bridging the divide through science, stewardship and partnership. As India marches toward the ambition of **Viksit Bharat 2047**, crop protection will remain a central enabler – not the villain of the narrative, but a driver of productivity, sustainability and national food security.



## IN THE PUBLIC EYE



Broadcast of CEO's Panel – Saturday, 1st November 2025 at 1.30 PM on ABP News



Broadcast of CEO's Panel - Sunday, 2nd November 2025 at 4:30 PM on ET Now



Office of Shivraj's post

Office of Shivraj  
26 September 2025

माननीय केंद्रीय मंत्री श्री Shivraj Singh Chouhan जी ने आज नई दिल्ली स्थित कॉन्टिन्ट्यूशन क्लब में CropLife India द्वारा आयोजित "National Conference 2025 | Viksit Bharat 2047 - One Trillion Contribution by Agriculture to the Economy: Role of Crop Protection Industry" में सहभागिता की और उपस्थित गणमान्यजनों को संबोधित किया।



Facebook Post from Shri Shivraj Singh Chouhan Ji



Speech of Shri Shivraj Singh Chouhan Ji



CropLife INDIA

**Hon'ble Union Minister of Agriculture and Farmers Welfare, Government of India**

**"Shri Shivraj Singh Chouhan"**

at our National Conference 2025

**किसान टॉक** | होम | मंत्री भाव | खबरें | सरकारी स्क्रीन | मंत्री रेट्स | किसान कमाल का टिप्स और ट्रिक्स | पशुपालन

**"बासमती धूम मचा रहा, कृषि निर्यात में 10% बढ़ोतरी" - केंद्रीय मंत्री शिवराज सिंह चौहान का बड़ा बयान**

दिल्ली में ऑप बाल्डुन इंडिया के राष्ट्रीय सम्मेलन में केंद्रीय कृषि मंत्री शिवराज सिंह चौहान हुए शामिल. शिवराज सिंह ने कहा, भटिया पेट्रोलिआइड, फर्टिलाइजर से किसानों को बचाने के लिए इंडस्ट्री भी ईमानदारी से करें काम, अग्रेज से आगस्त तक हमारा कृषि निर्यात 10% बढ़ा, बासमती धूम मचा रहा.

कृषि मंत्री शिवराज सिंह चौहान

**किसान टॉक** | होम | मंत्री भाव | खबरें | सरकारी स्क्रीन | मंत्री रेट्स | किसान कमाल का टिप्स और ट्रिक्स | पशुपालन

**फसल सुरक्षा बनेगी शक्ति, विकसित भारत 2047 का कृषि रोडमैप तैयार**

कौपलाहम इंडिया ने नेशनल कॉन्फ्रेंस 2025 में \$1 ट्रिलियन कृषि अर्थव्यवस्था के लिए फसल सुरक्षा की अहम भूमिका पर जोर दिया. जानिए कैसे विकसित भारत 2047 के लक्ष्य को पूरा करने के लिए सरकार, वैज्ञानिक और उद्योग मिलकर किसानों की उत्पादकता और शरत विकास को बढ़ावा दे रहे हैं.

**NATIONAL CONFERENCE 2025**

Viksit Bharat 2047 - One Trillion Contribution by the Agriculture to the Economy  
Role of Crop Protection Industry

September 2025  
New Delhi

Anil Kakkar | Ankur Aggarwal | Shivraj Singh Chouhan

कौपलाहम इंडिया का भविष्य का कार्मूल



**ANI**  
South Asia's Leading Multimedia News Agency



**NATIONAL CONFERENCE 2025**  
Viksit Bharat 2047 - One Trillion Contribution by the Agriculture to the Economy  
Role of Crop Protection Industry

Shri Shivraj Singh Chouhan at CropLife India National Conference

### CropLife India Maps \$1 Trillion Agri Economy Vision

ANI | Updated: Sep 29, 2025 14:20 IST

NewsVoir

New Delhi [India], September 29: CropLife India; the association of leading domestic and multinational R&D driven crop science companies; on its 45th AGM organized a National Conference. The conference witnessed the presence of Shri Shivraj Singh Chouhan, Hon'ble Union Minister of Agriculture & Farmers Welfare, Government of India; senior Government officials, experts, academia and industry leaders.

Multinational R&D driven crop science companies; on its 45th AGM organized a National Conference. The conference witnessed the presence of Shri Shivraj Singh Chouhan, Hon'ble Union Minister of Agriculture & Farmers Welfare, Government of India; senior Government officials, experts, academia and industry leaders.

National Conference 2025 opened with the Inaugural Session, setting the vision for Viksit Bharat 2047. This was followed by "The Regulatory Challenges and Opportunities in the Indian Context", where regulators, policymakers and industry leaders decode India's framework; Panel Discussion - "Empowering Farmers, Navigating Compliances & Global Standards: A State-wise View of the Agri-input (Crop Protection & Bio-stimulants) Industry & Export", highlighting state-level complexities and how policy, compliance and innovation can empower farmers and boost exports and the CEO's Panel - "Pesticides in the Spotlight: Villain, Hero or Scapegoat?", featuring a candid debate on the future of crop protection.



**LinkedIn**  
Top Content People Learning Jobs Games

### CropLife India Conference: Pesticides as Medicine for Plants

P.S. Saini  
4mo · Edited

Industry Leaders Debate Pesticides' Role at CropLife India Conference: #From #Villain to #Essential #Hero for Food Security

New Delhi. In a lively CEO panel titled "Pesticides in the Spotlight: Villain, Hero or Scapegoat?" at CropLife India's #National #Conference, top executives from the crop protection sector addressed misconceptions surrounding pesticides while highlighting India's growing prominence as the world's second-largest exporter and fourth-largest manufacturer of these products. Moderated by veteran journalist Mr Prabhu Chawla, the discussion focused on perception challenges, image-building, and the need for safe, scientific usage to combat crop losses and ensure food security.

Panelists unanimously framed pesticides as "medicine for plants," emphasizing that responsible application, farmer training, innovation, and transparent communication could position India as a global leader in sustainable agriculture. The session underscored the industry's commitment to integrated solutions amid debates on environmental and health concerns.

Mr Susheel Kumar, Managing Director of Syngenta #India, stressed the protective role of crop solutions: "Crop protection is medicine for plants—without it, farmers face heavy losses. India can lead globally with integrated, sustainable solutions."

Echoing the theme of efficiency over excess, Mr Ankur Aggarwal, Managing Director of Crystal Crop Protection, pointed out India's restrained usage: "India uses just 400 g/ha of pesticides against the global 8,000 g/ha—our challenge is not overuse, but misuse and misperception."

Mr Sahin Ozkan, Managing Director of ADAMA India, highlighted education as key: "Farmer training is the cornerstone of safe crop protection and India is fast emerging as a global agrochemical hub alongside China."



CEO's Panel  
"PESTICIDES IN THE SPOTLIGHT: VILLAIN, HERO OR SCAPEGOAT?"

173 · 3 Comments



**THE WIRE** English हिंदी తెలుగు ગુજરાત

HOME POLITICS ECONOMY WORLD SECURITY LAW SCIENCE SOCIETY CULTURE

The Wire is run by a non-profit foundation and we need your support to keep our newsroom

PTIPRNEWS

### CropLife India Maps \$1 Trillion Agri Economy Vision

PTI  
29/Sep/2025 · 5 min read

Union Minister, policymakers, academia and industry chart roadmap for crop protection's role in achieving Viksit Bharat 2047 vision" during the National Conference 2025



**KJ KRISHI JAGRAN** News #FactCheck Agriculture World Agripedia More

### CropLife India Maps USD 1 Trillion Agri Economy Vision

CropLife India marked its 45th AGM with a National Conference 2025, focusing on Viksit Bharat 2047, regulatory challenges, and sustainable agriculture. Union Minister Shivraj Singh Chouhan, industry leaders, and experts emphasized innovation, farmer empowerment, and responsible growth.

KJ Staff Updated 29 September, 2025 8:39 AM IST



**NATIONAL CONFERENCE 2025**  
Viksit Bharat 2047 - One Trillion Contribution by the Agriculture to the Economy  
Role of Crop Protection Industry

September 2025  
New Delhi

Shivraj Singh Chouhan, Union Minister of Agriculture & Farmers Welfare, at the CropLife India National Conference 2025. (Photo Source: Crop Life)

The Tribune

Home / Business / CropLife India Maps \$1 Trillion Agri Economy Vision

### CropLife India Maps \$1 Trillion Agri Economy Vision

ANI  
Updated at: 02:25 PM Sep 29, 2025 IST

FOLLOW US CONNECT WITH US

THE HINDU **businessline** Search Stock Quot

AGRI BUSINESS

## Ankur Aggarwal re-elected as chairman of CropLife India

**PREMIUM**

Ankur Aggarwal, Managing Director of Crystal Crop Protection Ltd., has been re-elected as the Chairman of the Board during the 45th Annual General Meeting, held recently

By *BL Bengaluru Bureau*  
Updated - October 09, 2025 at 02:24 PM.

**CropLife India re-elects Mr. Ankur Aggarwal as Chairman and Mr. Mohan Babu as Vice Chairman and elects Dr. Gyanendra Shukla as Second Vice Chairman during its 45<sup>th</sup> AGM**

**LATESTLY**

Home / Agency News

### Business News | CropLife India Maps \$1 Trillion Agri Economy Vision

Get latest articles and stories on Business at LatestLY. New Delhi [India], September 29: CropLife India; the association of leading domestic and multinational R&D driven crop science companies; on its 45th AGM organized a National Conference. The conference witnessed the presence of Shri Shivraj Singh Chouhan, Hon'ble Union Minister of Agriculture & Farmers Welfare, Government of India; senior Government officials, experts, academia and industry leaders.

f X S in

## GLOBAL AGRICULTURE

Food Security With Sustainability

**INDIA REGION**

### From Lab to Land: Ensuring Research Benefits India's Farmers — Chouhan at CropLife National Conference

September 28, 2025 • CropLife India, CropLife India National Conference

28 September 2025, New Delhi: Union Minister for Agriculture & Farmers Welfare and Rural Development, Shivraj Singh Chouhan, called on the crop protection industry to act ethically and responsibly to protect farmers from substandard pesticides and fertilisers during the CropLife India national conference. Takeaway: Ethical practices in input manufacturing and distribution are critical to farmer trust and long-term business sustainability.

Chouhan highlighted that agricultural exports rose by 10% between April and August, with basmati rice making a global impact. Takeaway: High-quality Indian produce is creating opportunities for exporters and input companies that enable better yields.

The minister stressed "lab-to-land" research delivery, urging industry collaboration with scientists to address real-world challenges like pest outbreaks and crop diseases. Takeaway: Investing in targeted R&D and extension services creates actionable solutions for farmers, strengthening industry relevance.

**ICN**  
INDIAN CHEMICAL NEWS

Home » Policy » Stakeholders must ensure prosperity of farmers and sustainable agriculture: Agriculture Minister Chouhan

### Stakeholders must ensure prosperity of farmers and sustainable agriculture: Agriculture Minister Chouhan

*Policymakers, academia and industry chart roadmap for crop protection's role in achieving "Viksit Bharat 2047 vision" during CropLife India's Conference in New Delhi*

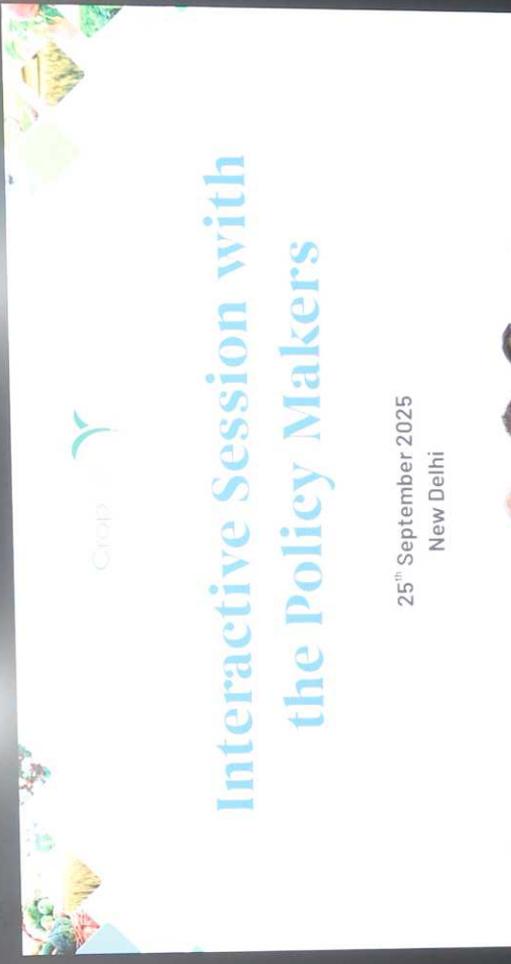
By *ICN Bureau* | September 26, 2025

f X S in

**NATIONAL CONFERENCE 2025**  
Viksit Bharat 2047: One Trillion Contribution by the Agriculture to the Economy Role of Crop Protection Industry

CropLife India, the association of leading domestic and multinational R&D driven crop science companies, organized a National Conference on the occasion of its 45th AGM. The conference witnessed the presence of the Union Minister of Agriculture & Farmers Welfare, Government of India; senior Government officials, experts, academia and industry leaders.

During his inaugural address, Shivraj Singh Chouhan, Union Minister of Agriculture & Farmers Welfare, Government of India, shared that, "For me, the farmer is the soul of our nation, and serving them is a gift from God. From the days of food scarcity and dependence on imports, India has today become self-reliant and an emerging exporter—with agriculture growing by 10% in recent months. Yet, with our population set to reach 170 crore by 2050, ensuring food and nutritional security is our foremost duty. Nearly half our people depend on farming, most with less than two acres of land, and our policies must reflect this reality. To achieve a \$5 trillion economy, we must increase productivity per hectare, embrace new technologies, and translate research into solutions for farmers' real problems. Agriculture is not just an industry—it is a national responsibility. Together, the Government, scientists and industry must ensure prosperity for farmers, sustainability for our land, and nourishment for humanity."



# Interactive Session with the Policy Makers

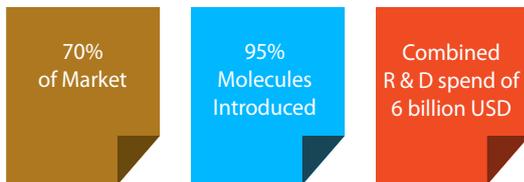
25<sup>th</sup> September 2025  
New Delhi





CropLife is a Network of Global Federations comprising of regional and national associations in **91 countries**.

**CropLife India** represents:



**CropLife India,**  
702, 7<sup>th</sup> Floor, Bhikaji Cama Bhawan,  
Bhikaji Cama Place, New Delhi - 110066

+91 11 26196681 / 26186296

[www.croplifeindia.org](http://www.croplifeindia.org)

[communications@croplifeindia.org](mailto:communications@croplifeindia.org)