

Fostering Ease of Doing Business in Agrochemical Sector



The agrochemical sector is vital to Indian agriculture, driving productivity and food security, yet it faces persistent regulatory and policy hurdles. As India pursues self-reliance and agri-innovation, fostering a supportive business environment is essential. This report aims to bring together diverse stakeholders to deliberate on these challenges and chart a collaborative roadmap for advancing ease of doing business in the agrochemical sector.



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1. Introduction

The agrochemical industry is a cornerstone of modern Indian agriculture, providing farmers with critical tools to manage pests, diseases, and weeds. Despite its importance in enhancing productivity and ensuring food security, the sector continues to be weighed down by regulatory, structural, and policy challenges. With India aiming to become self-reliant in agriculture and attract more innovation and investments in this space, fostering ease of doing business in the agrochemical sector is imperative.

This roundtable brings together key stakeholders from government bodies, the agrochemical industry, academia, legal and policy circles to discuss a unified roadmap for creating a more efficient and supportive business ecosystem.

2. Key Themes of Discussion

A. Regulatory Bottlenecks & Overlapping Acts

India's agrochemical sector continues to operate under the outdated **Insecticides Act, 1968**, while the **Pesticide Management Bill (PMB)** awaits finalization, causing uncertainty and regulatory limbo. Several procedural or technical lapses under the *Insecticides Act, 1968*, the *Pesticide Management Bill (PMB)*, and the *Environment (Protection) Act, 1986* currently attract criminal penalties, including imprisonment, even for minor offences – leading to fear, litigation, and operational bottlenecks for manufacturers, dealers, and even farmers.

Multiple ministries and agencies (MoA, MoEFCC and MoH) with overlapping roles cause **inconsistent interpretations** and **long registration timelines (3–5 years)**.

India lacks formal data protection norms for agrochemicals. While patents are respected, post-expiry data holds no protection, and undefined approval timelines discourage new product development. This gap limits innovation and deters innovators' investments.

Key Recommendations:

- Expedite enactment of the **Pesticide Management Bill** through multi-stakeholder consensus
- Launch a **single-window digital platform** for registrations and dossier evaluation
- High time to incept **time-bound data protection guidelines** to support innovation and R&D investments to mitigate various challenges of exotic pests due to climate changes.

B. Licensing, Safety & Environmental Compliance

Manufacturers face **state-wise licensing multiplicity** with no uniform criteria, delaying market entry and raising compliance costs.

Environmental clearances under hazardous substances laws are **duplicative**, especially for **low-dose or bio-based products** (like neem-based products in India require full EIA clearance)

Lack of dedicated infrastructure for **toxicity and safety testing** of newer-generation pesticides (e.g., biopesticides, nano-formulations) slows approvals.

Key Recommendations:

- Harmonize **licensing norms** across states with a **central compliance portal**
- Streamline environmental approvals for **non-hazardous/low-toxicity products/reduced hazard products categories**.
- Strengthen **testing and evaluation labs** for quicker turnaround and robust safety validation

C. Registration & Data Requirements

Delays in dossier evaluation due to manpower crunch and lack of outsourcing mechanisms within CIB&RC.

Bio-efficacy data requirements for **technical registrations** should be reviewed as these products are not directly applied in fields. This will speed-up the process.

MRL approvals take time due to separate processing by CIB&RC and FSSAI without synchronization.

***Example:** India remains one of the few countries requiring translocation, dissipation, etc data even for technical products meant for formulation manufacturing only.*

Key Recommendations:

- Allow **outsourced evaluation** of registration dossiers as there should be a fixed timeline or deadline for completion of registration requests of new products (formulated/ technical) , formulated products, generic products, equivalent technical product, atypical product, pre-mixture. **Reference-Brazil**
- Review of bio-efficacy data requirements/trial-period for **technical registrations** to shorten the registration process.
- Enable **parallel MRL processing** at FSSAI besides CIB&RC which normally takes another 4-6 months to get the final approval.

D. Trade, Innovation & Formulation Challenges

No clear pathway exists for registration of **globally available generic molecules** that are unregistered in India.

Ambiguities in **packaging norms, and data requirements** increase time-to-market for minor product tweaks.

***Example:** A manufacturer shifting from tin to HDPE packaging for better safety had to repeat the entire shelf-life study and approval cycle.*

Key Recommendations:

- Create fast-track pathways for **global generics registration** with risk categorization.
- Establish a **uniform policy** for TIM/TI registrations and toll manufacturing on know-how transfer basis
- Rationalise data requirements for change in **packaging**.
- Harmonisation of National MRLs with CODEX & other countries MRLs.

E. Bio Products, Drone Use & Digital AgTech

Rampant mixing/spiking of **chemical pesticides in bio-products** threatens consumer trust and undermines regulatory intent.

Despite SOPs for **drone-based application**, registration approvals for label expansion are still pending from the authorities.

Lack of robust traceability and **digital monitoring systems** for quality control, especially in bio and rural segments.

Example: *In eastern UP, multiple cases of duplicate packaging and spurious products were traced due to absence of traceability and enforcement mechanism.*

Key Recommendations:

- Enforce **bio-product purity standards** with state-level awareness & national monitoring system
- Fast-track **label expansion** and registration of products for **drone-based usage**
- Promote **digitization & traceability systems** across the agrochemical value chain

F. Intellectual Property Rights (IPR) and Innovation Challenges

The industry faces significant challenges due to high research and development expenditures coupled with regulatory delays. Complex patent thickets covering molecules, formulations, and processes further complicate portfolio management. Additionally, weak enforcement mechanisms and the absence of uniform data exclusivity create further hurdle.

Rampant counterfeiting, deceptively similar and phonetic marks, and local language adaptations dilute brand identity. Low awareness among farmers and difficulties in harmonizing trademarks globally add to the burden.

Copying of packaging, labels, and colour schemes misleads farmers. Proving distinctiveness in rural markets is difficult due to low literacy and fragmented consumption. Enforcement in remote areas is costly and logistically challenging.

Labels, manuals, advertisements, and farmer education material are frequently copied, but copyright issues are often overlooked, with weak enforcement making remedies ineffective.

Counterfeits dominate rural markets, litigation costs are high, judicial processes are slow, and global variations in IP protection complicate portfolio management.

Key Recommendations:

- **Patents:** Measures such as expedited examination, extensions of patent terms, and clearer guidelines for incremental innovations are needed.
- **Trademarks & Trade Dress:** Establish anti-counterfeit cells, mandate QR codes/holograms, and strengthen trade dress recognition.

- *Copyright*: Protect agrochemical labels, manuals, and digital content with stronger digital enforcement.
- *Farmer & Market Reforms*: Launch awareness drives, provide R&D tax credits, and encourage public–private research collaborations.
- *Enforcement & Judiciary*: Establish specialized fast-track IP courts, enforce stricter penalties for counterfeiting by recognizing it as both an intellectual property and public health offense, and strengthen border control measures.

G. Operational and Field-Level Challenges

Agrochemicals are classified under hazardous goods, resulting in logistical restrictions and high compliance costs.

Labeling and packaging requirements often vary by state and are not aligned with international trade norms.

Limited use of digital tools in approval and monitoring systems.

Key Recommendations:

- Rationalize the classification of agrochemicals with risk-based assessment rather than hazard-based.
- Standardize labeling norms in line with FAO and WHO guidelines.
- Leverage digital technologies for end-to-end application tracking and field audit transparency.
- Decriminalize minor, non-intentional offences by substituting criminal provisions with graded civil penalties or administrative fines.
- Establish clear criteria to differentiate between malafide violations and procedural non-compliance, ensuring proportional enforcement.

H. Farmers' and Consumers' Perspective

Even though regulatory, industrial, and institutional challenges dominate policy discussions, the end-users – **farmers and consumers** – often face practical issues that deserve equal attention:

Inadequate access to correct information, trained extension personnel and usage method details leads to incorrect use, **overdosing or underdosing of agrochemicals**, affecting both efficacy and safety. This often contributes to product failure, yield loss, pest resistance, residue issues, conversion of minor pest to major pest.

Many label claims are **not included in State Agriculture Universities' Package of Practices**, making them ineligible for extension support or subsidies.

Persistent use of certain agrochemicals has led to pest resistance. However, timely communication and proactive product rotation strategies from the industry have been lacking, leaving farmers with limited alternatives.

Grant of registration under new molecule definition is welcome step but that need to be granted in time bound manner

Despite regulatory bans, some **discontinued or highly hazardous products** continue to circulate in informal markets due to lack of enforcement on the illegal import/manufacturing and farmer awareness, posing risks to health and environment.

Improper usage, combined with ineffective training, results in **pesticide residue violations**, leading to consumer distrust in food safety and affecting domestic as well as export markets.

Example: In 2025, Indian agricultural exports to the EU faced increased scrutiny and rejection rates due to high pesticide residue levels, particularly in spices and non-basmati rice.

Key Recommendations:

- Develop **farm-level advisory networks** in partnership with Krishi Vigyan Kendras (KVKs) and FPOs to ensure rational and responsible agrochemical use.
- Align label recommendations with **Package of Practices (PoP)** through collaboration with SAUs and ICAR institutes.
- Strengthen market surveillance to **eliminate banned or spurious products** from circulation and reward compliance.

3. Way Forward

A unified and progressive regulatory approach is the need of the hour. Stakeholder consultations should feed into real-time reforms, especially in the context of the proposed PMB. Emphasizing transparency, innovation support, and global competitiveness must be at the core of future reforms.

Government, industry, and academia must collaborate through ongoing platforms and create a permanent body at national level for constantly reviewing the issues affecting the agrochemical industry to:

- Co-create a national roadmap for agrochemical reform.
- Advocate for predictable policies to attract both domestic and foreign investment.
- Create awareness among farmers and distributors about responsible agrochemical use, aligning with sustainability goals.

4. Conclusion

This roundtable is a step toward unlocking the full potential of India's agrochemical sector. By removing regulatory bottlenecks, protecting innovation, and ensuring operational ease, we can not only empower the industry but also make Indian agriculture more resilient, productive, and globally competitive.

The insights generated from this discussion will be consolidated into a policy brief for submission to relevant ministries and regulatory bodies for further action.

Governing Council: KRISHI ANUSANDHAN & KISAN VIKAS FOUNDATION



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IIMA Alumnus & Advocate, Supreme Court of India, NGT & Delhi High Court; Spl. in Techno-legal, IPR & Contracts Matters; Corporate Governance Trainer for Independent Directors; Member-Corporate Boards & Expert Committees



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An accomplished professional with 45 years of experience in Agri Input industry with having diverse leading role. Holding unanimously elected position of President-Agri Alumni Association of Pantnagar since its inception in 2008



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Anil Jaysing Ghanwat

Farmer Representative

Anil Ghanwat (B.Sc. Agriculture), 63 years old, is a farmer from SriGonda in Ahmednagar district in Maharashtra. Since 1985 he has been involved with the Shetkari Sanghatana



Dr. Arvind Kapur

Seed Expert

Ph. D in Plant physiology bearing over 3 decades of experience in National and Multinational Seed Industry. He is also a prominent member of various business associations like CII, FICCI, Assocham, and PHDCCI, chairs of the APSA IP Committee



Dr. Ramendra Singh

Crop Nutrition

Dr. Ramendra Singh, a Soil Scientist, has over 45 years' experience in Natural Resource Management (NRM) for sustainable agriculture.



Dr. R.K. Malik

Agronomist

Dr. Ram Kanwar Malik, Ph.D in Agronomy is a renowned Agronomist with more than 45 years of experience. He has successfully implemented many projects in association with CIMMYT, IRRI, ACIAR, DFID, ICAR (NATP and NARP) and FAO



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