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Pesticides Use, Regulation and Policies in Indian Agriculture

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Posted: 31 May 2024

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Date Written: May 31, 2024

Abstract

This research paper presents a comprehensive analysis of the global and Indian agricultural landscape concerning the utilization of pesticides to address the mounting challenge of food security amidst escalating population growth and heightened demand for food and fiber crops. Despite the imperative role of pesticides in mitigating losses attributed to pests, diseases, and weeds, escalating apprehensions regarding their adverse health and environmental impacts have necessitated a critical examination of their usage patterns. The study scrutinizes the evolving trends in pesticide application globally and within India, alongside an exploration of the shifting dynamics across different states and crop varieties. Furthermore, it delves into the categorization of pesticides and their respective market shares, providing insights into production and export patterns. Additionally, the research investigates regulatory frameworks aimed at optimizing pesticide utilization while minimizing detrimental effects on human health and the environment. While India's per-hectare pesticide usage stands at a relatively modest 0.4 kg, in contrast to comparable nations such as China where it reaches 1.83 kg per hectare, concerns persist regarding pesticide residue contamination within the food chain, necessitating urgent attention. Moreover, substantial disparities in pesticide application across regions and crops underscore the imperative for remedial actions to achieve greater uniformity and sustainability in agricultural practices.

Keywords: pesticides, India, pesticide residues, regulation, policies[Suggested Citation](#) >[Show Contact Information](#) > [Download This Paper \(Delivery.cfm/4850017.pdf?abstractid=4850017&mirid=1\)](https://papers.ssrn.com/sol3/cf_dev/AbsByAuth.cfm?per_id=907854&abstractid=4850017&mirid=1)[Open PDF in Browser \(Delivery.cfm/4850017.pdf?abstractid=4850017&mirid=1&type=2\)](https://papers.ssrn.com/sol3/cf_dev/AbsByAuth.cfm?per_id=907854&abstractid=4850017&mirid=1&type=2)

28 References

1. China Brazil , Germany
2. A A Reddy , A Bhattacharya , S V Reddy , S Ricart
Farmers' distress index: An approach for an action plan to reduce vulnerability in the drylands of India , volume 10 Posted: 2021
3. E C Oerke
Crop losses to pests
The Journal of agricultural science , volume 144 , issue 1 , p. 31 - 43 Posted: 2006
4. G S Dhaliwal , V Jindal , B Mohindru
Crop losses due to insect pests: global and Indian scenario